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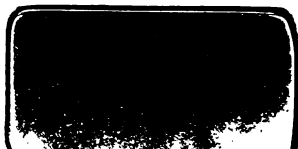
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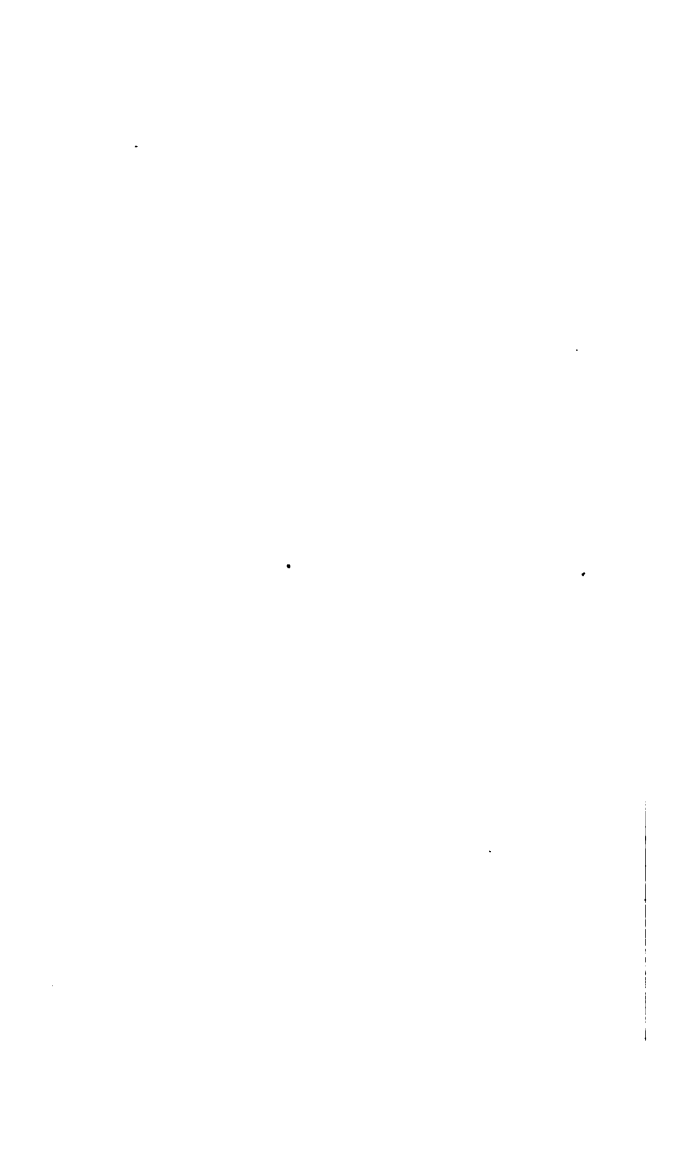
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Benjamin Franklin

Benjamin Franklin

B. FRANKLIN

New York Published by R. & W. A. Bartow, 1822.

ESSAYS AND LETTERS,

BY

DR. B. FRANKLIN.

PART I.

Moral and Philosophical.

VOL. I.

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ESSAYS AND LETTERS

ON

MORAL AND PHILOSOPHICAL SUBJECTS.

THE BUSY-BODY.—No. I.

*From the American Weekly Mercury, from Tuesday,
Jan. 28 to Tuesday, Feb. 4, 1728—9.*

MR. ANDREW BRADFORD,

I DESIGN this to acquaint you, that I, who have long been one of your courteous readers, have lately entertained some thought of setting up for an author myself: not out of the least vanity, I assure you, or desire of showing my parts, but purely for the good of my country.

I have often observed with concern, that your Mercury is not always equally entertaining. The delay of ships expected in, and want of fresh advices, from Europe, make it frequently very dull; and I find the freezing of our river has the same effect on news as trade. With more concern have I continually observed the growing vices and follies of my country folk: and though reformation is properly the concern of every man, ~~that~~ is, every one ought to mend one; yet it is too true in this case, that what

is every body's business is no body's business, and the business is done accordingly. I therefore, upon mature deliberation, think fit to take nobody's business wholly into my own hands ; and, out of zeal for the public good, design to erect myself into a kind of *sensor morum* ; purposing, with your allowance, to make use of the Weekly Mercury as a vehicle, in which my remonstrances shall be conveyed to the world.

I am sensible I have in this particular, undertaken a very unthankful office, and expect little besides my labour for my pains. Nay, it is probable, I may displease a great number of your readers, who will not very well like to pay ten shillings a year for being told of their faults. But as most people delight in censure, when they themselves are not the objects of it, if any are offended at my publicly exposing their private vices, I promise they shall have the satisfaction, in a very little time, of seeing their good friends and neighbours in the same circumstances.

However, let the fair sex be assured, that I shall always treat them and their affairs with the utmost decency and respect. I intend now and then to dedicate a chapter wholly to their service ; and if my lectures any way contribute to the embellishment of their minds and brightening of their understandings, without offending their modesty, I doubt not of having their favour and encouragement.

It is certain, that no country in the world produces naturally finer spirits than ours, men of genius for every kind of science, and capable of ac-

quiring to perfection every qualification that is in esteem among mankind. But as few here have the advantage of good books, for want of which, good conversation is still more scarce, it would doubtless have been very acceptable to your readers, if, instead of an old out-of date article from Muscovy or Hungary, you had entertained them with some well-chosen extract from a good author. This I shall sometimes do, when I happen to have nothing of my own to say that I think of more consequence. Sometimes, I purpose to deliver lectures of morality or philosophy, and (because I am naturally inclined to be meddling with things that do not concern me) perhaps I may sometimes talk politics : and if I can, by any means furnish out a weekly entertainment for the public, that will give a rational diversion, and at the same time be instructive to the readers, I shall think my leisure hours well employed : and if you publish this, I hereby invite all ingenious gentlemen and others, that approve of such an undertaking, to my assistance and correspondence.

It is like, by this time, you have a curiosity to be acquainted with my name and character. As I do not aim at public praise, I design to remain concealed : and there are such numbers of our family and relations at this time in the country, that, though I have signed my name at full length, I am not under the least apprehension of being distinguished and discovered by it. My character, indeed, I would favour you with, but that I am cautious of praising myself, lest I should be told my trumpeter's dead:

and I cannot find in my heart, at present, to say any thing to my own disadvantage.

It is very common with authors in their first performances to talk to their readers thus ; " If this meets with a suitable reception, or, if this should meet with due encouragement, I shall hereafter publish," &c. This only manifests the value they put on their own writings, since they think to frighten the public, into their applause, by threatening, that unless you approve what they have already wrote, they intend never to write again ; when perhaps it may not be a pin matter whether they ever do or no. As I have not observed the critics to be more favourable on his account, I shall always avoid saying any thing of the kind, and conclude with telling you, that if you send me a bottle of ink and a quire of paper by the bearer, you may depend on hearing farther from,

Sir,

Your most humble servant,

THE BUSY-BODY.

THE BUSY-BODY.—No. II.

*From Tuesday, February 4, to Tuesday, February
11, 1728—9.*

ON VULGAR DERISION.

All fools have still an itching to deride,
And fain would be upon the laughing side.—Pope.

MONSIEUR Rochefoucault tells us somewhere in his *Memoirs*, that the prince of Condé delighted much

in ridicule, and used frequently to shut himself up for half a day together, in his chamber, with a gentleman, that was his favourite, purposely to divert himself with examining what was the foible, or ridiculous side, of every noted person in the court. That gentleman said afterwards in some company, that he thought nothing was more ridiculous in any body, than this same humour in the prince; and I am somewhat inclined to be of this opinion. The general tendency there is among us to this embellishment, (which I fear has too often grossly imposed upon my loving countrymen instead of wit) and the applause it meets with from a rising generation, fill me with fearful apprehensions for the future reputation of my country: a young man of modesty (which is the most certain indication of large capacities) is hereby discouraged from attempting to make any figure in life: his apprehensions of being outlaughed will force him to continue in a restless obscurity, without having an opportunity of knowing his own merit himself, or discovering it to the world, rather than venture to expose himself in a place where a pun or a sneer shall pass for wit, noise for reason, and the strength of the argument be judged by that of the lungs. Among these witty gentlemen, let us take a view of Ridentius. What a contemptible figure does he make with his train of paltry admirers! This wight shall give himself an hour's diversion with the cock of a man's hat, the heels of his shoes, an unguarded expression in his discourse, or even some personal defect; and the height of his low ambition is to put some one of the company to the blush, who

perhaps must pay an equal share of the reckoning with himself. If such a fellow makes laughing the sole end and purpose of his life, if it is necessary to his constitution, or if he has a great desire of growing suddenly fat, let him eat ; let him give public notice where any dull stupid rogues may get a quart of four-penny for being laughed at ; but it is barbarously unhandsome, when friends meet for the benefit of conversation, and a proper relaxation from business, that one should be the butt of the company, and four men made merry at the cost of the fifth.

How different from this character is that of the good-natured, gay Eugenius ! who never spoke yet but with a design to divert and please, and who was never yet balked in his intention. Eugenius takes more delight in applying the wit of his friends, than in being admired himself : and if any one of the company is so unfortunate as to be touched a little too nearly, he will make use of some ingenious artifice to turn the edge of ridicule another way, choosing rather to make himself a public jest, than be at the pain of seeing his friend in confusion.

Among the tribe of laughers I reckon the pretty gentlemen, that write satires, and carry them about in their pockets, reading them themselves in all company they happen to go into ; taking an advantage of the ill taste of the town, to make themselves famous for a pack of paltry, low nonsense, for which they deserve to be kicked rather than admired, by all who have the least tincture of politeness. These I take to be the most incorrigible of all my readers ; nay, I expect they will be squibbing at the Busy-

Body himself. However, the only favour he begs of them is this ; that if they cannot control their overbearing itch of scribbling, let him be attacked in downright biting lyrics ; for there is no satire he dreads half so much as an attempt towards a panegyric.

THE BUSY-BODY.—No. III.

From Tuesday, February 11, to Tuesday, February 18, 1728—9.

Non vultus instantis tyranni
Mente quatit solidâ, nec Auster,
Dux inquieti turbidus Adriæ,
Nec fulminantis magna Jovis manus.—*Hor.*

It is said, that the Persians, in their ancient constitution, had public schools, in which virtue was taught as a liberal art or science : and it is certainly of more consequence to a man, that he has learned to govern his passions ; in spite of temptation, to be just in his dealings, to be temperate in his pleasures, to support himself with fortitude under his misfortunes, to behave with prudence in all his affairs, and in every circumstance of life ; I say, it is of much more real advantage to him to be thus qualified, than to be a master of all the arts and sciences in the world beside.

Virtue alone is sufficient to make a man great, glorious, and happy. He that is acquainted with Cato, as I am, cannot help thinking as I do now, and will acknowledge he deserves the name, without being honoured by it. Cato is a man whom fortune

has placed in the most obscure part of the country. His circumstances are such as only put him above necessity, without affording him many superfluities : yet who is greater than Cato ? I happened but the other day to be at a house in town, where, among others, were met men of the most note in this place ; Cato had business with some of them, and knocked at the door. The most trifling actions of a man, in my opinion, as well as the smallest features and lineaments of the face, give a nice observer some notion of his mind. Methought he rapped in such a peculiar manner, as seemed of itself to express there was one who deserved as well as desired admission. He appeared in the plainest country garb ; his great coat was coarse, and looked old and threadbare ; his linen was homespun ; his beard, perhaps, of seven days' growth ; his shoes thick and heavy ; and every part of his dress corresponding. Why was this man received with such concurring respect from every person in the room, even from those who had never known him or seen him before ? It was not an exquisite form of person or grandeur of dress, that struck us with admiration. I believe long habits of virtue have a sensible effect on the countenance : there was something in the air of his face, that manifested the true greatness of his mind ; which likewise appeared in all he said, and in every part of his behaviour obliging us to regard him with a kind of veneration. His aspect is sweetened with humanity and benevolence, and at the same time emboldened with resolution, equally free from diffident bashfulness and an unbecoming assurance. The consciousness of his

own innate worth and unshaken integrity renders him calm and undaunted in the presence of the most great and powerful, and upon the most extraordinary occasions. His strict justice and known impartiality make him the arbitrator and decider of all differences that arise for many miles around him, without putting his neighbours to the charge, perplexity, and uncertainty of law-suits. He always speaks the thing he means, which he is never afraid or ashamed to do, because he knows he always means well ; and therefore is never obliged to blush, and feel the confusion of finding himself detected in the meanness of a falsehood. He never contrives ill against his neighbour, and therefore, is never seen with a louring, suspicious aspect. A mixture of innocence and wisdom makes him ever seriously cheerful. His generous hospitality to strangers according to his ability, his goodness, his charity, his courage in the cause of the oppressed, his fidelity in friendship, his humility, his honesty and sincerity, his moderation and his loyalty to the government, his piety, his temperance, his love to mankind, his magnanimity, his public spiritedness, and, in fine, his consummate virtue, make him justly deserve to be esteemed the glory of his country.

The brave do never shun the light,
Just are their thoughts, and open are their tempers ;
Freely, without disguise, they love and hate :
Still are they found in the fair face of day,
And heaven and men are judges of their actions.

Rowe.

Who would not rather choose, if it were in his choice, to merit the above character, than be the richest, the most learned, or the most powerful man in the province without it?

Almost every man has a strong natural desire of being valued and esteemed by the rest of his species ; but I am concerned and grieved to see how few fall into the right and only infallible method of becoming so. That laudable ambition is too commonly misapplied, and often ill employed. Some, to make themselves considerable, pursue learning ; others grasp at wealth ; some aim at being thought witty ; and others are only careful to make the most of a handsome person : but what is wit, or wealth, or form, or learning, when compared with virtue ? It is true, we love the handsome, we applaud the learned, and we fear the rich and powerful ; but we even worship and adore the virtuous. Nor is it strange ; since men of virtue are so rare, so very rare to be found. If we were as industrious to become good as to make ourselves great, we should become really great by being good, and the number of valuable men would be much increased ; but it is a grand mistake to think of being great without goodness ; and I pronounce it as certain, that there was never yet a truly great man, that was not at the same time truly virtuous.

O Cretico, thou sour philosopher ! thou cunning statesman ! thou art crafty, but far from being wise. When wilt thou be esteemed, regarded, and beloved like Cato ? When wilt thou, among thy creatures,

meet with that unfeigned respect and warm goodwill that all men have for him? Wilt thou never understand, that the cringing, mean, submissive deportment of thy dependents, is (like the worship paid by Indians to the devil) rather through fear of the harm thou mayest do them, than out of gratitude for the favours they have received of thee? Thou art not wholly void of virtue; there are many good things in thee, and many good actions reported of thee. Be advised by thy friend: neglect those musty authors; let them be covered with dust, and moulder on their proper shelves; and do thou apply thyself to a study much more profitable—the knowledge of mankind and of thyself.

This is to give notice, that the Busy-body strictly forbids all persons, from this time forward, of what age, sex, rank, quality, degree, or denomination soever, on any pretence, to inquire who is the author of this paper, on pain of his displeasure (his own near and dear relations only excepted.)

It is to be observed, that if any bad characters happen to be drawn in the course of these papers, they mean no particular person, if they are not particularly applied.

Likewise, that the author is no party-man, but a general meddler.

N. B. Cretico lives in a neighbouring province.

THE BUSY-BODY.—NO. IV.

*From Tuesday, February 18, to Tuesday, February
25, 1728—9.*

Ne quid nimis.

IN my first paper, I invited the learned and the ingenious to join with me in this undertaking ; and I now repeat that invitation. I would have such gentlemen take this opportunity (by trying their talent in writing) of diverting themselves and friends, and improving the taste of the town. And because I would encourage all wit of our own growth and produce, I hereby promise, that whoever shall send me a little essay on some moral or other subject, that is fit for public view in this manner, (and not basely borrowed from any other author) I shall receive it with candour, and take care to place it to the best advantage. It will be hard, if we cannot muster up in the whole country a sufficient stock of sense to supply the Busy-body at least for a twelvemonth. For my own part, I have already professed, that I have the good of my country wholly at heart in this design, without the least sinister view ; my chief purpose being to inculcate the noble principles of virtue, and depreciate vice of every kind. But as I know the mob hate instruction, and the generality would never read beyond the first line of my lectures, if they were actually filled with nothing but wholesome precepts and advice, I must therefore sometimes hu-

mour them in their own way. There are a set of great names in the province, who are the common objects of popular dislike. If I can now and then overcome my reluctance, and prevail with myself to satirize, a little, one of these gentlemen, the expectation of meeting with such a gratification will induce many to read me through, who would otherwise proceed immediately to the foreign news. As I am very well assured the greatest men among us have a sincere love for their country, notwithstanding its ingratitude, and the insinuations of the envious and malicious to the contrary, so I doubt not but they will cheerfully tolerate me in the liberty I design to take for the end above-mentioned.

As yet I have but a few correspondents, though they begin now to increase. The following letter, left for me at the printer's, is one of the first I have received, which I regard the more for that it comes from one of the fair sex, and because I have myself oftentimes suffered under the grievance therein complained of.

To the Busy-Body.

SIR,

You having set yourself up for a *censuror morum* (as I think you call it) which is said to mean a reformer of manners, I know no person more proper to be applied to for redress in all the grievances we suffer from want of manners in some people. You must know, I am a single woman, and keep a shop in this

town for a livelihood. There is a certain neighbour of mine, who is really agreeable company enough, and with whom I have had an intimacy of some time standing ; but of late she makes her visits so exceedingly often, and stays so very long every visit, that I am tired out of all patience. I have no manner of time at all to myself ; and you, who seem to be a wise man, must needs be sensible, that every person has little secrets and privacies, that are not proper to be exposed even to the nearest friend. Now I cannot do the least thing in the world, but she must know about it ; and it is a wonder I have found an opportunity to write you this letter. My misfortune is that I respect her very well, and know not how to disoblige her so much as to tell her I should be glad to have less of her company ; for if I should once hint such a thing, I am afraid she would resent it so as never to darken my door again. But, alas ! Sir, I have not yet told you half my affliction. She has two children, that are just big enough to run about and do pretty mischief : these are continually along with mama, either in my room or shop, if I have ever so many customers or people with me about business. Sometimes they pull the goods off my low shelves down to the ground, and perhaps where one of them has just been making water. My friend takes up the stuff, and cries, " Oh ! thou little wicked mischievous rogue ! But, however, it has done no great damage ; it is only wet a little ;" and so puts it up upon the shelf again. Sometimes they get to my cask of nails behind the counter, and divert themselves, to

my great vexation, with mixing my ten-penny and eight-penny and four-penny together. I endeavour to conceal my uneasiness as much as possible, and with a grave look go to sorting them out. She cries, "Don't thee trouble thyself, neighbour. Let them play a little ; I'll put all to rights before I go." But things are never so put to rights but that I find a great deal of work to do after they are gone. Thus, sir, I have all the trouble and pesterment of children, without the pleasure of calling them my own ; and they are now so used to being here that they will be content nowhere else. If she would have been so kind as to have moderated her visits to ten times a day, and stayed but half an hour at a time, I should have been contented, and I believe never have given you this trouble. But this very morning they have so tormented me that I could bear no longer ; for while the mother was asking me twenty impertinent questions, the youngest got to my nails, and with great delight rattled them by handfuls all over the floor ; and the other at the same time made such a terrible din upon my counter with a hammer, that I grew half-distracted. I was just then about to make myself a new suit of pinnars ; but in the fret and confusion I cut it quite out of all manner of shape, and utterly spoiled a piece of the first muslin. Pray, sir, tell me what I shall do ; and talk a little against such unreasonable visiting in your next paper : though I would not have her affronted with me for a great deal ; for sincerely I love her and her children, as well, I think, as a neighbour can, and she buys a great many things in

a year at my shop. But I would beg her to consider, that she uses me unmercifully, though I believe it is only for want of thought. But I have twenty things more to tell you besides all this : there is a handsome gentleman that has a mind (I don't question) to make love to me ; but he can't get the opportunity to—— O dear, here she comes again ; I must conclude. Yours, &c.

PATIENCE.

Indeed, it is well enough, as it happens, that she is come to shorten this complaint, which I think is full long enough already, and probably would otherwise have been as long again. However, I must confess, I cannot help pitying my correspondent's case ; and in her behalf, exhort the visiter to remember and consider the words of the wise man, "Withdraw thy foot from the house of thy neighbour, lest he grow weary of thee, and so hate thee." It is, I believe, a nice thing, and very difficult, to regulate our visits in such a manner, as never to give offence by coming too seldom, or too often, or departing too abruptly, or staying too long. However in my opinion, it is safest for most people, in a general way, who are unwilling to disoblige, to visit seldom, and tarry but a little while in a place—notwithstanding pressing invitations, which are many times insincere : and though more of your company should be really desired, yet in this case, too much reservedness is a fault more easily excused than the contrary.

Men are subject to various inconveniences merely through lack of a small share of courage, which is a

quality very necessary in the common occurrences of life, as well as in a battle. How many impertinencies do we daily suffer with great uneasiness, because we have not courage enough to discover our dislike ! And why may not a man use the boldness and freedom of telling his friends that their long visits sometimes incommode him ? On this occasion, it may be entertaining to some of my readers, if I acquaint them with the Turkish manner of entertaining visitors, which I have from an author of unquestionable veracity, who assures us, that even the Turks are not so ignorant of civility and the arts of endearment, but that they can practise them with as much exactness as any other nation, whenever they have a mind to show themselves obliging.

“ When you visit a person of quality (says he) and have talked over your business, or the compliments, or whatever concern brought you thither, he makes a sign to have things served in for the entertainment, which is generally a little sweetmeat, a dish of sherbet, and another of coffee ; all which are immediately brought in by the servants, and tendered to all the guests in order, with the greatest care and awfulness imaginable. At last comes the finishing part of your entertainment, which is, perfuming the beards of the company ; a ceremony which is performed in this manner. They have for the purpose a small silver chafing-dish, covered with a lid full of holes, and fixed upon a handsome plate. In this they put some fresh coals, and upon them a piece of lignum aloes ;

and shutting it up, the smoke immediately ascends with a grateful odour through the holes of the cover. This smoke is held under every ones chin, and offered as it were a sacrifice to his beard. The bristly idol soon receives the reverence done to it, and so greedily takes in and incorporates the gummy steam, that it retains the savour of it, and may serve for a nosegay a good while after.

“ This ceremony may perhaps seem ridiculous at first hearing ; but it passes among the Turks for a high gratification ; and I will say this in its vindication, that its design is very wise and useful : for it is understood to give a civil dismissal to the visitants, intimating to them, that the master of the house has business to do, or some other avocation, that permits them to go away as soon as they please ; and the sooner after this ceremony the better. By this means you may, at any time without offence, deliver yourself from being detained from your affairs by tedious and unseasonable visits ; and from being constrained to use that piece of hypocrisy, so common in the world, of pressing those to stay longer with you, whom perhaps in your heart you wish a great way off for having troubled you so long already.”

Thus far my author. For my own part, I have taken such a fancy to this Turkish custom, that for the future I shall put something like it in practice. I have provided a bottle of right French brandy for the men, and citron water for the ladies. After I have treated with a dram, and presented a pinch of

my best snuff, I expect all company will retire, and leave me to pursue my studies for the good of the public.

Advertisement..

I give notice that I am now actually compiling, and design to publish in a short time, the true history of, the rise, growth, and progress of the renowned Tiff Club. All persons who are acquainted with any facts, circumstances, characters, transactions, &c. which will be requisite to the perfecting and embellishment of the said work, are desired to communicate the same to the author, and direct their letters to be left with the printer hereof.

The letter signed Would-be-something is come to hand.

THE BUSY-BODY.—No. V

*From Tuesday, February, 25, to Tuesday, March 4,
1728—9,*

Vos, o patricius sanguis, quos vivere fas est
Occipiti cæco, posticæ occurrite sannæ.

Persius.

THIS paper being designed for a terror to evil doers, as well as a praise to them that do well, I am lifted up with secret joy to find that my undertaking is approved and encouraged by the just and good, and

not only a faculty of discovering the actions of persons that are absent or asleep, but even of the devil himself, in many of his secret workings, in the various shapes, habits, and names of men and women : and having travelled and conversed much, and met with but a very few of the same perceptions and qualifications, I can recommend myself to you as the most useful man you can correspond with. My father's father's father (for we had no grand-fathers in our family) was the same John Bunyan who wrote that memorable book, *The Pilgrim's Progress*, who had, in some degree, a natural faculty of second sight. This faculty (how derived to him our family memoirs are not very clear) was enjoyed by all his descendants, but not by equal talents. It was very dim in several of my first cousins, and probably had been nearly extinct in our particular branch, had not my father been a traveller. He lived, in his youthful days, in New England. There he married, and there was born my elder brother, who had so much of this faculty as to discover witches in some of their occult performances. My parents transporting themselves to Great Britain, my second brother's birth was in that kingdom. He shared but a small portion of this virtue, being only able to discern transactions about the time of, and for the most part after, their happening. My good father, who delighted in the *Pilgrim's Progress*, and mountainous places, took shipping, with his wife, for Scotland, and inhabited in the Highlands, where myself was born ; and whether the soil, climate, or

astral influences, of which are preserved divers prognostics, restored our ancestors' natural faculty of second sight in a greater lustre to me than it had shined in through several generations, I will not here discuss. But so it is, that I am possessed largely of it, and design, if you encourage the proposal, to take this opportunity of doing good with it, which I question not will be accepted of in a grateful way by many of your honest readers, though the discovery of my extraction bodes me no deference from your great scholars and modern philosophers. This my father was long ago aware of; and lest the name alone should hurt the fortunes of his children, he, in his shiftings from one country to another, wisely changed it.

"Sir, I have only this farther to say, how I may be useful to you, and as a reason for my not making myself more known in the world. By virtue of this great gift of nature, second-sightedness, I do continually see numbers of men, women, and children, of all ranks, and what they are doing, while I am sitting in my closet; which is too great a burthen for the mind, and makes me also conceit, even against reason, that all this host of people can see and observe me, which strongly inclines me to solitude and an obscure living; and, on the other hand, it will be an ease to me to disburthen my thoughts and observations in the way proposed to you by, sir, your friend and humble servant."

I conceal this correspondent's name, in my care for his life and safety, and cannot but approve his prudence in choosing to live obscurely. I remember the fate of my poor monkey: he had an ill-natured trick of grinning and chattering at every thing he saw in petticoats. My ignorant country neighbours got a notion that pug snarled by instinct at every female who had lost her virginity. This was no sooner generally believed, than he was condemned to death—by whom I could never learn; but he was assassinated in the night, barbarously stabbed and mangled in a thousand places, and left hanging dead on one of my gate-posts, where I found him the next morning.

The censor, observing that the itch of scribbling begins to spread exceedingly, and being carefully tender of the reputation of his country, in point of wit and good sense, has determined to take all manner of writings in verse or prose, that pretend to either, under his immediate cognizance; and, accordingly, hereby prohibits the publishing any such for the future till they have first passed his examination, and received his imprimatur; for which he demands as a fee only sixpence per sheet.

N. B. He nevertheless permits to be published all satirical remarks on the Busy-Body, the above prohibition notwithstanding, and without examination, or requiring the said fees; which indulgence the small wits in and about this city are advised gratefully to accept and acknowledge.

The gentleman who calls himself Sirronio is directed, on receipt of this, to burn his great book of Crudities.

P. S. In compassion to that young man, on account of the great pains he has taken, in consideration of the character I have just received of him, that he is really good-natured, and on condition he shows it to no foreigner or stranger of sense, I have thought fit to reprieve his said great book of Crudities the flames till farther order.

Noli me tangere.

I had resolved, when I first commenced this design, on no account to enter into a public dispute with any man; for I judged it would be equally unpleasant to me and my readers, to see this paper filled with contentious wrangling, answers, replies, &c. which is a way of writing that is endless, and, at the same time, seldom contains any thing that is either edifying or entertaining. Yet, when such a considerable man as Mr. * * * finds himself concerned so warmly to accuse and condemn me, as he has done in Keimer's last Instructor, I cannot forbear endeavouring to say something in my own defence, from one of the worst of characters that could be given me by a man of worth. But as I have many things of more consequence to offer the public; I declare that I will never, after this time, take notice of any accusations, not better supported with truth and reason; much less may every little scribbler, that

shall attack me, expect an answer from the Busy Body.

The sum of the charge delivered against me, either directly or indirectly, in the said paper, is this : not to mention the first weighty sentence concerning vanity and ill-nature, and the shrewd intimation that I am without charity, and therefore can have no pretence to religion, I am represented as guilty of defamation and scandal, the odiousness of which is apparent to every good man, and the practice of it opposite to Christianity, morality, and common justice, and, in some cases, so far below all these, as to be inhuman ; as a blaster of reputations ; as attempting, by a pretence, to screen myself from the imputation of malice and prejudice ; as using a weapon, which the wiser and better part of mankind hold in abhorrence ; and as giving treatment which the wiser and better part of mankind dislike on the same principles, and for the same reason, as they do assassination, &c. ; and all this is inferred and concluded from a character I have wrote in my Number III.

In order to examine the justice and truth of this heavy charge, let us recur to that character. And here we may be surprised to find what a trifle has raised this mighty clamour and complaint, this grievous accusation !—The worst thing said of the person, in what is called my gross description (be he who he will to whom my accuser has applied the character of Cretico), is, that he is a sour philosopher, crafty, but not wise. Few human characters can be

drawn that will not fit somebody, in so large a country as this ; but one would think, supposing I meant Cretico a real person, I had sufficiently manifested my impartiality, when I said, in that very paragraph, that Cretico is not without virtue ; that there are many good things in him, and many good actions reported of him ; which must be allowed in all reason very much to over-balance in his favour those worst words, sour tempered, and cunning. Nay, my very enemy and accuser must have been sensible of this, when he freely acknowledges, that he has been seriously considering, and cannot yet determine, which he would choose to be, the Cato or Cretico of that paper ; since my Cato is one of the best of characters. Thus much in my own vindication. As to the only reasons there given why I ought not to continue drawing characters, viz. Why should any man's picture be published which he never sat for ; or his good name taken from him any more than his money or possessions, at the arbitrary will of another, &c. I have but this to answer : the money or possessions, I presume, are nothing to the purpose ; since no man can claim a right either to those or a good name, if he has acted so as to forfeit them. And are not the public the only judges what share of reputation they think proper to allow any man ? Supposing I was capable, and had an inclination, to draw all the good and bad characters in America, why should a good man be offended with me for drawing good characters ? And if I draw ill ones, can they fit any but those that deserve them ? And ought any but such

to be concerned that they have their deserts? I have as great an aversion and abhorrence for defamation and scandal as any man, and would, with the utmost care, avoid being guilty of such base things besides, I am very sensible and certain, that if I should make use of this paper to defame any person, my reputation would be sooner hurt by it than his; and the Busy-Body would quickly become detestable; because, in such a case, as is justly observed, the pleasure arising from a tale of wit and novelty soon dies away in generous and honest minds, and is followed with a secret grief, to see their neighbours calumniated. But if I myself was actually the worst man in the province, and any one should draw my true character, would it not be ridiculous in me to say, he had defamed and scandalized me, unless he had added in a matter of truth? If any thing is meant by asking why any man's picture should be published which he never sat for? it must be, that we should give no character without the owner's consent. If I discern the wolf disguised in harmless wool, and contriving the destruction of my neighbour's sheep, must I have his permission before I am allowed to discover and prevent him? If I know a man to be a designing knave, must I ask his consent, to bid my friends beware of him? If so, then, by the same rule, supposing the Busy-Body had really merited all his enemy had charged him with, his consent likewise ought to have been obtained, before so terrible an accusation was published against him.

I shall conclude with observing, that in the last

paragraph save one of the piece now examined, much ill nature and some good sense are coinhabitants, as he expresses it. The ill nature appears, in his endeavouring to discover satire, where I intend no such thing, but quite the reverse: the good sense is this; that drawing too good a character of any one is a refined manner of satire, that may be as injurious to him as the contrary, by bringing on an examination that undresses the person; and in the haste of doing it, he may happen to be stripped of what he really owns and deserves. As I am censor, I might punish the first, but I forgive it. Yet I will not leave the latter unrewarded; but assure my adversary, that in consideration of the merit of those four lines, I am resolved to forbear injuring him on any account in that refined manner.

I thank my neighbour P*** W*** for his kin letter.

The lions complained of shall be muzzled.

THE BUSY-BODY.—No. VIII.

From Tuesday, March 18, to Tuesday, March 25
1729.

Quid non mortalia pectora cogis,
Auri sacra fames?——*Virgil.*

ONE of the greatest pleasures an author can have, is, certainly, the hearing his works applauded. The

hiding from the world our names, while we publish our thoughts, is so absolutely necessary to this self-gratification, that I hope my well-wishers will congratulate me on my escape from the many diligent but fruitless inquiries that have of late been made after me. Every man will own, that an author, as such, ought to be hid by the merit of his productions only; but pride, party, and prejudice, at this time, run so very high, that experience shows we form our notions of a piece by the character of the author, Nay, there are some very humble politicians in and about this city, who will ask on which side the writer is before they presume to give the opinion of the thing wrote. This ungenerous way of proceeding I was well aware of before I published my first speculation; and therefore concealed my name: and I appeal to the more generous part of the world, if I have, since I appeared in the character of the Busy-Body, given an instance of my siding with any party more than another, in the unhappy divisions of my country; and I have, above all, this satisfaction in myself, that neither affection, aversion, or interest, have biassed me to use any partiality towards any man or set of men; but whatsoever I find nonsensical, ridiculous, or immorally dishonest, I have, and shall continue openly to attack, with the freedom of an honest man, and a lover of my country.

I profess I can hardly contain myself, or preserve the gravity and dignity that should attend the censorial office, when I hear the odd and unaccountable expositions that are put upon some of my works

through the malicious ignorance of some, and the vain pride of more than ordinary penetration in others ; one instance of which many of my readers are acquainted with. A certain gentleman has taken a great deal of pains to write a key to the letter in my Number IV, wherein he has ingeniously converted a gentle satire upon tedious and impertinent visitants, into a libel on some of the government. This I mention only as a specimen of the taste of the gentleman ; I am, forsooth, bound to please in my speculations, not that I suppose my impartiality will ever be called in question on that account. Injustices of this nature I could complain of in many instances ; but I am at present diverted by the reception of a letter, which, though it regards me only in my private capacity, as an adept, yet I venture to publish it for the entertainment of my readers.

“ To Censor Morum, Esq. Busy-Body General of the Province of Pennsylvania, and the Counties of Newcastle, Kent, and Sussex upon Delaware.

“ HONOURABLE SIR,

“ I JUDGE by your lucubrations, that you are not only a lover of truth and equity, but a man of parts and learning, and a master of science ; as such I honour you. Know then, most profound sir, that I have, from my youth up, been a very indefatigable student in, and admirer of, that divine science, astrology. I have read over Scot, Albertus Magnus, and Cornelius Agrippa, above three hundred times ; and was in hopes, by my knowledge and industry

to gain enough to have recompensed me for my money expended, and time lost in the pursuit of this learning. You cannot be ignorant, sir, (for your intimate second-sighted correspondent knows all things) that there are large sums of money hidden under ground in divers places about this town, and in many parts of the country : but alas ! sir, notwithstanding I have used all the means laid down in the immortal authors before-mentioned, and, when they failed, the ingenious Mr. P—d—I, with his mercurial wand and magnet, I have still failed in my purpose. This, therefore, I send, to propose and desire an acquaintance with you ; and I do not doubt, notwithstanding my repeated ill fortune, but we may be exceedingly serviceable to each other in our discoveries ; and that if we use our united endeavours, the time will come, when the Busy-Body, his second-sighted correspondent, and your very humble servant, will be three of the richest men in the province : and then, sir, what may we not do ? A word to the wise is sufficient.

“ I conclude with all demonstrable respect,

“ Your's and Urania's votary,

“ TITAN PLEIADS.”

In the evening after I had received this letter, I made a visit to my second-sighted friend, and communicated to him the proposal. When he had read it, he assured me, that to his certain knowledge here is not at this time so much as one ounce of silver or gold hid under ground in any part of this province ;

for that the late and present scarcity of money had obliged those, who were living, and knew where they had formerly hid any, to take it up, and use it in their own necessary affairs : and as to all the rest, which was buried by pirates and others in old times, who were never like to come for it, he himself had long since dug it all up, and applied it to charitable uses ; and this he desired me to publish for the general good. For, as he acquainted me, there are among us great numbers of honest artificers and labouring people, who, fed with a vain hope of growing suddenly rich, neglect their business, almost to the ruining of themselves and families, and voluntarily endure abundance of fatigue in a fruitless search after imaginary hidden treasure. They wander through the woods and bushes by day, to discover the marks and signs ; at midnight they repair to the hopeful spots with spades and pickaxes ; full of expectation, they labour violently, trembling at the same time in every joint, through fear of certain malicious dæmons, who are said to haunt and guard such places. At length a mighty hole is dug, and perhaps several cartloads of earth thrown out ; but, alas, no keg or iron pot is found ! no seaman's chest crammed with Spanish pistoles, or weighty pieces of eight ! Then they conclude, that through some mistake in the procedure, some rash word spoke, or some rule of art neglected, the guardian spirit had power to sink it deeper into the earth, and convey it out of their reach. Yet, when a man is once thus infatuated, he is so far from being discouraged by ill success, that he is

rather animated to double his industry, and will try again and again in a hundred different places, in hopes at last of meeting with some lucky hit, that shall at once sufficiently reward him for all his expense of time and labour.

This odd humour of digging for money, through a belief that much has been hid by pirates formerly frequenting the river, has for several years been mighty prevalent among us ; insomuch that you can hardly walk half a mile out of the town on any side, without observing several pits dug with that design, and perhaps some lately opened. Men, otherwise of very good sense, have been drawn into this practice, through an overweening desire of sudden wealth, and an easy credulity of what they so earnestly wished might be true ; while the rational and almost certain methods of acquiring riches by industry and frugality are neglected or forgotten. There seems to be some peculiar charm in the conceit of finding money ; and if the sands of Schuylkil were so much mixed with small grains of gold, that a man might in a day's time, with care and application, get together to the value of half-a-crown, I make no question but we should find several people employed there, that can with ease earn five shillings a day at their proper trades.

Many are the idle stories told of the private success of some people, by which others are encouraged to proceed ; and the astrologers, with whom the country swarms at this time, are either in the belief of these things themselves, or find their advantage

in persuading others to believe them ; for they are often consulted about the critical times for digging, the methods of laying the spirit, and the like whimsies, which renders them very necessary to, and very much caressed by, the poor deluded money-hunters.

There is certainly something very bewitching in the pursuit after mines of gold and silver and other valuable metals, and many have been ruined by it. A sea-captain of my acquaintance used to blame the English for envying Spain their mines of silver and too much despising or overlooking the advantages of their own industry and manufactures. "For my part," says he, "I esteem the banks of Newfoundland to be a more valuable possession than the mountains of Potosi ; and when I have been there on the fishing account have looked upon every Cod pulled up into the vessel as a certain quantity of silver ore, which required only carrying to the next Spanish port to be coined into pieces of eight ; not to mention the national profit of fitting out and employing such a number of ships and seamen." Let honest Peter Buckram, who has long, without success, been a searcher after hidden money, reflect on this, and be reclaimed from that unaccountable folly. Let him consider, that every stitch he takes when he is on his shop-board is picking up part of a grain of gold, that will in a few days' time amount to a pistole, and let Faber think the same of every nail he drives, or every stroke with his plane. Such thoughts may make them industrious, and, of consequence, in time

they may be wealthy. But how absurd is it to neglect a certain profit for such a ridiculous whimsey ! to spend whole days at the George, in company with an idle pretender to astrology, contriving schemes to discover what was never hidden, and forgetful how carelessly business is managed at home in their absence ! to leave their wives and a warm bed at midnight (no matter if it rain, hail, snow, or blow a hurricane, provided that be the critical hour,) and fatigue themselves with the violent exercise of digging for what they shall never find, and perhaps getting a cold that may cost their lives, or at least disordering themselves so as to be fit for no business beside for some days after ! Surely this is nothing less than the most egregious folly and madness.

I shall conclude with the words of my discreet friend, Agricola, of Chester county, when he gave his son a good plantation :—" My son," says he, " I give thee now a valuable parcel of land ; I assure thee I have found a considerable quantity of gold by digging there ; thee mayest do the same : but thee must carefully observe this, Never to dig more than plough-deep."

DIALOGUE

BETWEEN PHILOCLES AND HORATIO, MEETING ACCIDENTALLY IN THE FIELDS, CONCERNING VIRTUE AND PLEASURE.

From the Pennsylvania Gazette, No. 84, June 23, 1730.

Philocles. My friend Horatio ! I am very glad to see you ; prithee how came such a man as you alone ? and musing too ? What misfortune in your pleasures has sent you to philosophy for relief ?

Horatio. You guess very right, my dear Philocles : we pleasure-hunters are never without them ; and yet so enchanting is the game, we cannot quit the chase. How calm and undisturbed is your life ! how free from present embarrassments and future cares ! I know you love me, and look with compassion upon my conduct ; show me, then, the path which leads up to that constant and invariable good, which I have heard you so beautifully describe, and which you seem so fully to possess.

Phil. There are few men in the world I value more than you, Horatio ! for, amidst all your foibles and painful pursuits of pleasure, I have oft observed in you an honest heart, and a mind strongly bent towards virtue. I wish, from my soul, I could assist you in acting steadily the part of a reasonable creature ; for if you would not think it a paradox, I

should tell you I love you better than you do yourself.

Hor. A paradox indeed ! Better than I do myself ? when I love my dear self so well, that I love every thing else for my own sake.

Phil. He only loves himself well, who rightly and judiciously loves himself.

Hor. what do you mean by that, Philocles ? You men of reason and virtue are always dealing in mysteries, though you laugh at them when the church makes them. I think he loves himself very well, and very judiciously too, as you call it, who allows himself to do whatever he pleases.

Phil. What, though it be to the ruin and destruction of that very self which he loves so well ? That man alone loves himself rightly, who procures the greatest possible good to himself through the whole of his existence ; and so pursues pleasure as not to give for it more than it is worth.

Hor. That depends all-upon opinion. Who shall judge what the pleasure is worth ? Suppose a pleasing form of the fair kind strikes me so much, that I can enjoy nothing without the enjoyment of that one object ; or that pleasure in general is so favourite a mistress, that I will take her, as men do their wives, for better, for worse ; minding no consequences, nor regarding what is to come—why should I not do it ?

Phil. Suppose, Horatio, that a friend of yours enters into the world about two-and-twenty, with a

healthful, vigorous body, and a fair plentiful estate of about five hundred pounds a year ; and yet before he had reached thirty, should, by following his own pleasures, and, not as you, duly regarding consequences, have run out of his estate, and disabled his body to that degree, that he had neither the means nor capacity of enjoyment left, nor any thing else to do but wisely shoot himself through the head to be at rest ; what would you say to this unfortunate man's conduct ? Is it wrong by opinion or fancy only ? or is there really a right and wrong in the case ? Is not one opinion of life and action juster than another ; or one sort of conduct preferable to another ? or does that miserable son of pleasure appear as reasonable and lovely a being in your eyes, as a man who, by prudently and rightly gratifying his natural passions, had preserved his body in full health, and his estate entire, and enjoyed both to a good old age, and then died with a thankful heart for the good things he had received, and with an entire submission to the will of him who first called him into being ? Say, Horatio, are these men equally wise and happy ? and is every thing to be measured by mere fancy and opinion, without considering whether that fancy or opinion be right ?

Hor. Hardly so neither, I think: yet sure the wise and good Author of nature could never make us to plague us. He could never give us passions, on purpose to subdue and conquer them ; nor produce this self of mine, or any other self, only that it may be denied ; for that is denying the works of the

great Creator, himself. Self-denial, then, which is what I suppose you mean by prudence, seems to be not only absurd, but very dishonourable to that supreme wisdom and goodness, which is supposed to make so ridiculous and contradictory a creature, that must be always fighting with himself in order to be at rest, and undergo voluntary hardships in order to be happy. Are we created sick only to be commanded to be sound? are we born under one law, our passions, and yet bound to another, that of reason? Answer me, Philocles? for I am warmly concerned for the honour of Nature, the mother of us all.

Phil. I find, Horatio, my two characters have affrighted you; so that you decline the trial of what is good by reason, and had rather make a bold attack upon Providence; the usual way of you gentlemen of fashion—who when, by living in defiance of the eternal rules of reason, you have plunged yourselves into a thousand difficulties, endeavour to make yourself easy by throwing the burthen upon nature. You are, Horatio, in a very miserable condition indeed; for you say you cannot be happy if you control your passions, and feel yourself miserable by an unrestrained gratification of them; so that here is evil, irremediable evil either way.

Hor. That is very true; at least it appears so to me. Pray what have you to say, Philocles, in honour of Nature or Providence? Methinks, I am in pain for her:—how do you rescue her, poor lady?

Phil. This, my dear Horatio, I have to say; that

what you find fault with, and clamour against, as the most terrible evil in the world, self-denial, is really the greatest good and the highest self-gratification. If indeed you use the word in the sense of some weak moralists, and much weaker divines, you will have just reason to laugh at it; but if you take it as understood by philosophers and men of sense, you will presently see her charms, and fly to her embraces, notwithstanding her demure looks, as absolutely necessary to produce even your own darling sole good, pleasure; for self-denial is never a duty, or a reasonable action, but as it is a natural means of procuring more pleasure than you can taste without it; so that this grave saint-like guide to happiness, as rough and dreadful as she has been made to appear, is in truth the kindest and most beautiful mistress in the world.

Hor. Prithee, Philocles, do not wrap yourself in allegory and metaphor. Why do you tease me thus? I long to be satisfied, what is the philosophical self-denial; the necessity and reason of it: I am impatient, and all on fire. Explain, therefore, in your beautiful, natural, easy way of reasoning, what I am to understand by this grave lady of yours, with so forbidding downcast looks, and yet so absolutely necessary to my pleasures: I stand to embrace her; for you know, pleasure I court under all shapes and forms.

Phil. Attend then, and you will see the reason of this philosophical self-denial. There can be no absolute perfection in any creature; because every

creature is derived from something of a superior existence, and dependent on that source for its own existence. No created being can be all-wise, all good and all powerful, because his powers and capacities are finite and limited ; consequently, whatever is created, must, in its own nature, be subject to irregularities, excess, and imperfections. All intelligent, rational agents, find in themselves a power of judging what kind of beings they are ; what actions are, proper to preserve them, and what consequences will generally attend them ; what pleasures they are for, and to what degree their natures are capable of receiving them. All we have to do then, Horatio, is to consider, when we are surprised with a new object, and passionately desire to enjoy it, whether the gratifying that passion be consistent with the gratifying other passions and appetites equal, if not more necessary to us, and whether it consists with our happiness to-morrow, next week, or next year : but as we all wish to live, we are obliged by reason to take as much care for our future as our present happiness, and not to build one upon the ruins of the other : but if, through the strength and power of a present passion, and through want of attending to consequences, we have erred and exceeded the bounds which nature or reason have set us ; we are then, for our own sakes, to refrain or deny ourselves a present momentary pleasure for a future, constant, and durable one ; so that this philosophical self-denial is only refusing to do an action which you strongly desire, because it is inconsistent with health, con-

venience, or circumstances in the world ; or, in other words, because it would cost you more than it was worth. You would lose by it, as a man of pleasure. Thus you see, Horatio, that self-denial is not only the most reasonable, but the most pleasant thing in the world.

Hor. We are just coming into town, so that we cannot pursue this argument any farther at present : you have said a great deal for nature, providence, and reason ; happy are they who can follow such divine guides.

Phil. Horatio, good night ; I wish you wise in your pleasures.

Hor. I wish, Philocles, I could be as wise in my pleasures as you are pleasantly wise : your wisdom is agreeable, your virtue is amiable, and your philosophy the highest luxury. Adieu, thou enchanting reasoner.

A SECOND DIALOGUE

BETWEEN PHILOCLES AND HORATIO, CONCERNING VIRTUE AND PLEASURE.

From the Pennsylvania Gazette, No. 86, July 9, 1730.

Phil. DEAR Horatio, where hast thou been these three or four months ? What new adventures have you fallen upon since I met you in these delightful, all-inspiring fields, and wondered how such a pleasure-hunter as you could bear being alone ?

Hor. O Philocles ! thou best of friends, because a friend to reason and virtue ! I am very glad to see you. Do not you remember I told you then, that some misfortunes in my pleasures had sent me to philosophy for relief ? but now I do assure you I can, without a sigh, leave other pleasures for those of philosophy ; I can hear the word reason mentioned, and virtue praised, without laughing. Do not I bid fair for conversion, think you ?

Phil. Very fair, Horatio ; for I remember the time when reason, virtue, and pleasure were the same thing with you ; when you counted nothing good but what pleased, nor any thing reasonable but what you gained by ; when you made a jest of a mind and the pleasures of reflection ; and elegantly placed your sole happiness, like the rest of the animal creation, in the gratification of sense.

Hor. I did so ; but in our last conversation, when walking upon the brow of this hill, and looking down on that broad, rapid river, and yon widely-extended, beautifully-varied plain, you taught me another doctrine : you showed me that self-denial, which, above all things, I abhorred, was really the greatest good, and the highest self-gratification, and absolutely necessary to produce even my own darling sole good—pleasure.

Phil. True ; I told you that self-denial was never a duty, but when it was a natural means of procuring more pleasure than we could taste without it : that as we all strongly desire to live, and to live only to enjoy ; we should take as much care about our su-

ture as our present happiness, and not build one upon the ruins of the other ; that we should look to the end, and regard consequences ; and if, through want of attention, we had erred, and exceeded the bounds which nature had set us—we were then obliged, for our own sakes, to refrain or deny ourselves a present momentary pleasure, for a future, constant, and durable good.

Hor. You have shown, Philocles, that self-denial, which weak or interested men have rendered the most forbidding, is really the most delightful and amiable, the most reasonable and pleasant thing in the world. In a word, if I understand you aright, self-denial is, in truth, self-recognising, self-acknowledging, or self-owning. But now, my friend, you are to perform another promise, and show me the path that leads up to that constant, durable, and invariable good, which I have heard you so beautifully describe, and which you seem so fully to possess. Is not this good of yours a mere chimera ? Can any thing be constant in a world which is eternally changing, and which appears to exist by an everlasting revolution of one thing into another ; and where every thing without us, and every thing within us, is in perpetual motion ? What is this constant durable good then of yours ? Prithee, satisfy my soul, for I am all on fire, and impatient to enjoy her. Produce this eternal, blooming goddess, with never-fading charms, and see whether I will not embrace her with as much eagerness and rapture as you.

Phil. You seem enthusiastically warm, Horatio:

I will wait till you are cool enough to attend to the sober dispassionate voice of reason.

Hor. You mistake me, my dear Philocles: my warmth is not so great as to run away with my reason; it is only just raised enough to open my faculties, and fit them to receive those eternal truths, and that durable good, which you so triumphantly boasted of. Begin, then: I am prepared.

Phil. I will. I believe, Horatio, with all your scepticism about you, you will allow that good to be constant, which is never absent from you; and that to be durable, which never ends but with your being.

Hor. Yes: go on.

Phil. That can never be the good of a creature, which, when present, the creature may be miserable, and when absent, is certainly so.

Hor. I think not: but pray explain what you mean; for I am not much used to this abstract way of reasoning.

Phil. I mean all the pleasures of sense. The good of man cannot consist in the mere pleasures of sense; because, when any one of those objects which you love is absent, or cannot be come at, you are certainly miserable; and if the faculty be impaired, though the object be present, you cannot enjoy it. So that this sensual good depends upon a thousand things without and within you, and all out of your power. Can this then be the good of man? Say, Horatio, what think you? is not this a checquered, fleeting, fantastical good? Can that, in any pre-

priety of speech, be called the good of man, which, even while he is tasting, he may be miserable ; and which, when he cannot taste, he is necessarily so ? Can that be our good which costs us a great deal of pains to obtain, which cloy in possessing, for which we cannot wait the return of appetite before we can enjoy again ? Or, is that our good which we can come at without difficulty, which is heightened by possession, which never ends in weariness and disappointment, and which, the more we enjoy, the better qualified we are to enjoy on ?

Hor. The latter, I think ; but why do you torment me thus ? Philocles, show me this good immediately.

Phil. I have showed you what it is not ; it is not sensual ; but it is rational and moral good : it is doing all the good we can to others, by acts of humanity, friendship, generosity, and benevolence. This is that constant and durable good, which will afford contentment and satisfaction always alike, without variation or diminution. I speak to your experience now, Horatio ; did you ever find yourself weary of relieving the miserable, or of raising the distressed into life or happiness ? or rather do not you find the pleasure grow upon you by repetition, and that it is greater in the reflection than in the act itself ? Is there a pleasure upon earth to be compared with that which arises from the sense of making others happy ? Can this pleasure ever be absent, or ever end, but with your being ? Does it not always accompany you ? Doth not it lie down

and rise with you, live as long as you live, give you consolation in the hour of death, and remain with you when all other things are going to forsake you, or you them?

Hor. How glowingly you paint, Philocles : methinks, Horatio is among the enthusiasts. I feel the passion ; I am enchantingly convinced ; but I do not know why ; overborne by something stronger than reason. Sure some divinity speaks within me. But prithee, Philocles, give me the cause why this rational and moral good so infinitely excels the mere natural or sensual.

Phil. I think, Horatio, that I have clearly shown you the difference between merely natural or sensual good, and rational or moral good. Natural or sensual pleasure continues no longer than the action itself ; but this divine or moral pleasure continues when the action is over, and swells and grows upon your hand by reflection : the one is unconstant, unsatisfying, of short duration, and attended with numberless ills ; the other is constant, yields full satisfaction, is durable, and no evils preceding, accompanying, or following it. But if you inquire farther into the cause of this difference, and would know why the moral pleasures are greater than the sensual, perhaps the reason is the same as in all other creatures ; that their happiness or chief good consists in acting up to their chief faculty, or that faculty which distinguishes them from all creatures of a different species. The chief faculty in man is his reason ; and, consequently, his chief good consists

not merely in action, but in reasonable action. By reasonable actions, we understand those actions which are preservative of the human kind, and naturally tend to produce real and unmixed happiness; and these actions, by way of distinction, we call actions morally good.

Hor. You speak very clearly, Philocles: but that no difficulty may remain on my mind, pray tell me what is the real difference between natural good and evil, and moral good and evil; for I know several people who use the terms without ideas.

Phil. That may be: the difference lies only in this—that natural good and evil are pleasure and pain, moral good and evil are pleasure or pain produced with intention and design; for it is the intention only that makes the agent morally good or bad.

Hor. But may not a man, with a very good intention, do an evil action?

Phil. Yes; but then he errs in judgment, though his design be good: if his error be inevitable, or such as, all things considered, he could not help, he is inculpable; but if it arose through want of diligence in forming his judgment about the nature of human actions, he is immoral and culpable.

Hor. I find then that in order to please ourselves rightly, or to do good to others morally, we should take great care of our opinions.

Phil. Nothing concerns you more; for as the happiness or real good of men consists in right action, and right action cannot be produced without

right opinion ; it behooves us, above all things in this world, to take care that our own opinions of things be according to the nature of things. The foundation of all virtue and happiness is thinking rightly. He who sees an action is right—that is, naturally tending to good, and does it because of that tendency, he only is a moral man ; and he alone is capable of that constant, durable, and invariable good, which has been the subject of this conversation.

Hor. How, my dear philosophical guide, shall I be able to know, and determine certainly, what is right and wrong in life ?

Phil. As easily as you distinguish a circle from a square, or light from darkness. Look, Horatio, into the sacred book of nature, read your own nature, and view the relation which other men stand in to you, and you to them, and you will immediately see what constitutes human happiness, and, consequently, what is right.

Hor. We are just coming into town, and can say no more at present. You are my good genius, Philocles ; you have showed me what is good ; you have redeemed me from the slavery and misery of folly and vice, and make me a free and happy being.

Phil. Then I am the happiest man in the world : be you steady, Horatio ; never depart from reason and virtue.

Hor. Sooner will I lose my existence. Good night, Philocles.

Phil. Adieu, dear Horatio

PUBLIC MEN.

*From the Pennsylvania Gazette, No. 95, Sept. 3,
1730.*

THE following is a dialogue between Socrates the great Athenian philosopher, and one Glaucon, a private man of mean abilities, but ambitious of being chosen a senator, and of governing the republic ; wherein Socrates, in a pleasant manner, convinces him of his incapacity for public affairs, by making him sensible of his ignorance of the interests of his country, in their several branches, and entirely dissuades him from any attempt of that nature. There is also added at the end, part of another dialogue the same Socrates had with one Charmidas, a worthy man, but too modest ; wherein he endeavours to persuade him to put himself forward and undertake public business, as being very capable of it. The whole is taken from Xenophon's Memorable Things of Socrates, lib. 3.

¶ A certain man, whose name was Glaucon, the son of Ariston, had so fixed it in his mind to govern the republic, that he frequently presented himself before the people to discourse of affairs of state, though all the world laughed at him for it ; nor was it in the power of his relations or friends to dissuade him from that design. But Socrates had a kindness for him on account of Plato, his brother ; and he only it was who made him change his resolution. He met

him, and accosted him in so winning a manner, that he first obliged him to hearken to his discourse. He began with him thus: "You have a mind, then, to govern the republic?" "I have so," answered Glaucon. "You cannot," replied Socrates, "have a more noble design: for if you can accomplish it, so as to become absolute, you will be able to serve your friends; you will raise your family; you will extend the bounds of your country; you will be known not only in Athens, but through all Greece; and perhaps your renown will fly even to the barbarous nations, as did that of Themistocles. In short, wherever you come, you will have the respect and admiration of all the world." These words soothed Glaucon, and won him to give ear to Socrates, who went on in this manner: "But it is certain, that if you desire to be honoured, you must be useful to the state." "Certainly," said Glaucon. "And in the name of all the gods," replied Socrates, "tell me what is the first service you intend to render the state." Glaucon was considering what to answer, when Socrates continued: "If you design to make the fortune of one of your friends, you will endeavour to make him rich; and thus, perhaps, you will make it your business to enrich the republic?" "I would," answered Glaucon. Socrates replied, "Would not the way to enrich the republic be to increase its revenue?" "It is very likely it would," answered Glaucon. "Tell me, then, in what consists the revenue of the state, and to how much may it amount? I presume you have particularly studi-

ed this matter, to the end that, if any thing should be lost on one hand, you might know where to make it good on another ; and that if a fund should fail on a sudden, you might immediately be able to settle another in its place." " I protest," answered Glaucon, " I have never thought of this." " Tell me, at least, the expenses of the republic ; for no doubt you mean to retrench the superfluous." " I have never thought of this either," said Glaucon. " You were best, then, to put off to another time your design of enriching the republic, which you can never be able to do while you are ignorant both of its expenses and revenue." " There is another way to enrich a state," said Glaucon, " of which you take no notice ; that is, by the ruin of its enemies." " You are in the right," answered Socrates ; " but to this end it is necessary to be stronger than they, otherwise we shall run the hazard of losing what we have : he, therefore, who talks of undertaking a war, ought to know the strength on both sides ; to the end that, if his party be the stronger, he may boldly advise for war ; and if it be the weaker, he may dissuade the people from engaging themselves in so dangerous an enterprise." " All this is true." " Tell me then," continued Socrates, " how strong our forces are by sea and land, and how strong are our enemies ?" " Indeed," said Glaucon, " I cannot tell you on a sudden." " If you have a list of them in writing, pray show it me ; I should be glad to hear it read." " I have it not yet." " I see then," said Socrates, " that we shall not engage in war so soon ; for the

greatness of the undertaking will hinder you from maturely weighing all the consequences of it in the beginning of your government. But," continued he, "you have thought of the defence of the country; you know what garrisons are necessary, and what are not; you know what number of troops is sufficient in one, and not sufficient in another; you will cause the necessary garrisons to be reinforced, and disband those that are useless?" "I should be of opinion," said Glaucon, "to leave none of them on foot, because they ruin a country on pretence of defending it." But Socrates objected, "If all the garrisons were taken away, there would be nothing to hinder the first comer from carrying off what he pleased. But how come you to know that the garrisons behave themselves well? Have you been upon the place? Have you seen them?" "Not at all: but I suspect it to be so." "When, therefore, we are certain of it," said Socrates, "and can speak upon better grounds than simple conjectures, we will propose this advice to the senate." "It may be well to do so," said Glaucon. "It comes into my mind too," said Socrates, "that you have never been at the mines of silver, to examine why they bring not in so much now as they did formerly." "You say true: I have never been there." "Indeed, they say the place is very unhealthy, and that may excuse you." "You rally me now," said Glaucon. Socrates added, "But I believe you have at least observed how much corn our lands produce, how long it will serve to supply our city, and how

much more we shall want for the whole year ; to the end you may not be surprised with a scarcity of bread, but may give timely orders for the necessary provisions." " There is a deal to do," said Glaucon, " if we must take care of all these things." " There is so," replied Socrates ; " and it is even impossible to manage our own families well, unless we know all that is wanting, and take care to provide it. As you see, therefore, that our city is composed of above ten thousand families, and it being a difficult task to watch over them all at once, why did you not first try to relieve your uncle's affairs, which are running to decay ? and, after having given that proof of your industry, you might have taken a greater trust upon you. But now, when you find yourself incapable of aiding a private man, how can you think of behaving yourself so as to be useful to a whole people ? Ought a man who has not strength to carry a hundred pound weight to undertake to carry a heavier burthen ?" " I would have done good service to my uncle," said Glaucon, " if he would have taken my advice." " How," replied Socrates, " have you not been able hitherto to govern the mind of your uncle ; and do you now believe yourself able to govern the minds of all the Athenians, and his among the rest ? Take heed, my dear Glaucon, take heed, lest too great a desire of power should render you despised ; consider how dangerous it is to speak and entertain ourselves concerning things we do not understand : what a figure do those forward and rash people make in the world who do

so ! and judge yourself whether they acquire more esteem than blame, whether they are more admired than contemned. Think, on the contrary, with how much honour a man is regarded who understands perfectly what he says and what he does, and then you will confess that renown and applause have always been the recompense of true merit ; and, if you enter upon the government of the republic with a mind more sagacious than usual, I shall not wonder if you succeed in all your designs."

Thus Socrates put a stop to the disorderly ambition of this man : but, on an occasion quite contrary, he in the following manner exhorted Charmidas to take an employment. He was a man of sense, and more deserving than most others in the same post ; but, as he was of a modest disposition, he constantly declined, and made great difficulties of engaging himself in public business. Socrates therefore addressed himself to him in this manner : " If you knew any man that could gain the prizes in the public games, and by that means render himself illustrious, and acquire glory to his country, what would you say of him if he refused to offer himself to the combat ?" " I would say," answered Charmidas, " that he was a mean spirited, effeminate fellow." " And if a man were capable of governing a republic, of increasing its power by his advice, and of raising himself by this means to a high degree of honour, would you not brand him likewise with a meanness of soul, if he would not present himself to be employed ?" " Perhaps I might," said Charmidas :

“but why do you ask me this question?” Socrates replied, “Because you are capable of managing the affairs of the republic; and, nevertheless, you avoid doing so, though, in quality of a citizen, you are obliged to take care of the commonwealth. Be no longer, then, thus negligent in this matter; consider your abilities and your duty with more attention; and let not slip the occasions of serving the republic, and of rendering it, if possible, more flourishing than it is. This will be a blessing whose influence will descend not only on the other citizens, but on your best friends and yourself.”

SELF DENIAL NOT THE ESSENCE OF VIRTUE.

From the Pennsylvania Gazette, No. 324, Feb. 18, 1735.

It is commonly asserted, that without self-denial there is no virtue, and that the greater the self-denial the greater the virtue.

If it were said that he who cannot deny himself any thing he inclines to, though he knows it will be to his hurt, has not the virtue of resolution or fortitude, it would be intelligible enough; but, as it stands, it seems obscure and erroneous.

Let us consider some of the virtues singly.

If a man has no inclination to wrong people in his dealings, if he feels no temptation to it, and therefore never does it, can it be said that he is not a just man? has he not the virtue of justice?

If to a certain man idle diversions have nothing in them that is tempting, and therefore he never relaxes his application to business for their sake, is he not an industrious man? or has he not the virtue of industry?

I might in like manner instance in all the rest of the virtues: but to make the thing short, as it is certain that the more we strive against the temptation to any vice, and practise the contrary virtue, the weaker will that temptation be, and the stronger will be that habit, till at length the temptation has no force, or entirely vanishes; does it follow from thence, that, in our endeavours to overcome vice, we grow continually less and less virtuous, till at length we have no virtue at all?

If self-denial be the essence of virtue, then it follows that the man who is naturally temperate, just, &c. is not virtuous; but that, in order to be virtuous, he must, in spite of his natural inclination, wrong his neighbours, and eat and drink, &c. to excess.

But perhaps it may be said, that by the word virtue, in the above assertion, is meant merit, and so it should stand thus: without self-denial there is no merit, and the greater the self-denial the greater the merit.

The self-denial here meant must be when our inclinations are toward vice, or else it would still be nonsense.

By merit is understood desert; and when we say a man merits, we mean that he deserves praise or reward.

We do not pretend to merit any thing of God, for he is above our services ; and the benefits he confers on us are the effects of his goodness and bounty.

All our merit then is with regard to one another, and from one to another.

Taking then the assertion as it last stands,

If a man does me a service from a natural benevolent inclination, does he deserve less of me than another, who does me the like kindness against his inclination ?

If I have two journeymen, one naturally industrious, the other idle, but both perform a day's work equally good, ought I to give the latter the most wages ?

Indeed, lazy workmen are commonly observed to be more extravagant in their demands than the industrious ; for, if they have not more for their work, they cannot live as well : but though it be true to a proverb that lazy folks take the most pains, does it follow that they deserve the most money ?

If you were to employ servants in affairs of trust, would you not bid more for one you knew was naturally honest, than for one naturally roguish, but who has lately acted honestly ? for currents, whose natural channel is dammed up, till the new course is by time worn sufficiently deep and become natural, are apt to break their banks. If one servant is more valuable than another, has he not more merit than the other ? and yet this is not on account of superior self-denial.

Is a patriot not praise-worthy if public spirit is natural to him ?

Is a pacing horse less valuable for being a natural pacer ?

Nor, in my opinion, has any man less merit for having in general natural virtuous inclinations.

The truth is, that temperance, justice, charity, &c. are virtues, whether practised with or against our inclinations, and the man who practises them merits our love and esteem ; and self-denial is neither good nor bad but as it is applied. He that denies a vicious inclination is virtuous in proportion to his resolution ; but the most perfect virtue is above all temptation, such as the virtue of the saints in heaven ; and he who does a foolish, indecent, or wicked thing, merely because it is contrary to his inclination, (like some mad enthusiasts I have read of, who ran about naked, under the notion of taking up the cross,) is not practising the reasonable science of virtue, but is a lunatic.

ON THE USEFULNESS OF MATHEMATICS.

From the Pennsylvania Gazette, No. 360, Oct. 30, 1735.

MATHEMATICS originally signifies any kind of discipline or learning, but now it is taken for that science which teaches or contemplates whatever is capable of being numbered or measured. That part of the mathematics which relates to numbers only, is called arithmetic ; and that which is concerned about

measure in general, whether length, breadth, motion, force, &c. is called geometry.

As to the usefulness of arithmetic, it is well known that no business, commerce, trade, or employment whatsoever, even from the merchant to the shop-keeper, &c. can be managed and carried on without the assistance of numbers ; for by these, the trader computes the value of all sorts of goods that he deal-eth in, does his business with ease and certainty, and informs himself how matters stand at any time with respect to men, money, or merchandize, to profit and loss, whether he goes forward or backward, grows richer or poorer. Neither is this science only useful to the merchant, but it is reckoned the *primum mobile* or first mover of all mundane affairs in general ; and is useful for all sorts and degrees of men, from the highest to the lowest.

As to the usefulness of geometry, it is as certain that no curious art, or mechanic work, can either be invented, improved, or performed, without its assisting principles.

It is owing to this that astronomers are put into a way of making their observations, coming at the knowledge of the extent of the heavens, the duration of time, the motions, magnitudes, and distances of the heavenly bodies, their situations, positions, risings, sittings, aspects, and eclipses ; also the measure of seasons, of years, and of ages.

It is by the assistance of this science, that geographers present to our view at once the magnitude

and form of the whole earth, the vast extent of the seas, the divisions of empires, kingdoms, and provinces.

It is by the help of geometry, the ingenious mariner is instructed how to guide a ship through the vast ocean, from one part of the earth to another, the nearest and safest way, and in the shortest time.

By help of this science, the architects take their just measures for the structure of buildings, as private houses, churches, palaces, ships, fortifications, &c.

By its help, engineers conduct all their work, take the situation and plan of towns, forts, and castles, measure their distances from one to another, and carry their measure into places that are only accessible to the eye.

From hence also is deduced that admirable art of drawing sun-dials on any plane, howsoever situate, and for any part of the world; to point out the exact time of the day, sun's declination, altitude, amplitude, azimuth, and other astronomical matters.

By geometry the surveyor is directed how to draw a map of any country, to divide his lands, and to lay down and plot any piece of ground, and thereby discover the area in acres, rods, and perches. The gauger is instructed how to find the capacities or solid contents of all kinds of vessels, in barrels, gallons, bushels, &c.; and the measurer is furnished with rules for finding the areas and contents of superficies and solids, and casting up all manner of workman-

ship. All these, and many more useful arts, too many to be enumerated here, wholly depend upon the aforesaid sciences, viz. arithmetic and geometry.

This science is descended from the infancy of the world ; the inventors of which were the first propagators of human kind, as Adam, Noah, Abraham, Moses, and divers others.

There has not been any science so much esteemed and honoured as this of the mathematics, nor with so much industry and vigilance become the care of great men, and laboured in by the potentates of the world, viz. emperors, kings, princes, &c.

Mathematical demonstrations are a logic of as much or more use than that commonly learned at schools serving to a just formation of the mind, enlarging its capacities, and strengthening it so as to render the same capable of exact reasoning, and discerning truth from falsehood in all occurrences, even subjects not mathematical. For which reason, it is said, the Egyptians, Persians, Lacedemonians, seldom elected any new kings, but such as had some knowledge in the mathematics ; imagining those who had not, men of imperfect judgments, and unfit to rule or govern.

Though Plato's censure, that those who did not understand the 117th proposition of the 13th book of Euclid's Elements ought not to be ranked amongst rational creatures, was unreasonable and unjust ; yet to give a man the character of universal knowledge who is destitute of a competent knowledge in the mathematics, is no less so.

The usefulness of some particular parts of the mathematics in the common affairs of human life, has rendered some knowledge of them very necessary to a great part of mankind, and very convenient to all the rest, that are any way conversant beyond the limits of their own particular calling.

Those whom necessity has obliged to get their bread by manual industry, where some degree of art is required to go along with it, and who have had some insight into these studies, have very often found advantages from them sufficient to reward the pains they were at in acquiring them: and whatever may have been imputed to some other studies, under the notion of insignificance or loss of time; yet these, I believe, never caused repentance in any, except it was for their remissness in the prosecution of them.

Philosophers do generally affirm that human knowledge to be most excellent which is conversant amongst the most excellent things. What science then can there be more noble, more excellent, more useful for men, more admirably high and demonstrative, than this of the mathematics?

I shall conclude with what Plato says, lib. 7 of his Republic, with regard to the excellence and usefulness of geometry; being to this purpose:—

“Dear friend,—You see then that mathematics are necessary; because, by the exactness of the method, we get a habit of using our minds to the best advantage: and it is remarkable, that all men being capable by nature to reason and understand

the sciences; the less acute, by studying this, though useless to them in every other respect, will gain this advantage; that their minds will be improved in reasoning aright; for no study employs it more, or makes it susceptible of attention so much; and those whom we find have a mind worth cultivating, ought to apply themselves to this study."

ON TRUE HAPPINESS.

*From the Pennsylvania Gazette, No. 363, Nov. 20,
1735.*

THE desire of happiness in general is so natural to us, that all the world are in pursuit of it: all have this one end in view, though they take such different methods to attain it, and are so much divided in their notions of it.

Evil as evil can never be chosen; and though evil is often the effect of our own choice, yet we never desire it, but under the appearance of an imaginary good.

Many things we indulge ourselves in may be considered by us evils, and yet be desirable; but then they are only considered as evils in their effects and consequences, not as evils at present, and attended with immediate misery.

Reason represents things to us not only as they are at present, but as they are in their whole nature and tendency; passion only regards them in their former light: when this governs us, we are regardless of the future, and are only affected with the present.

It is impossible ever to enjoy ourselves rightly, if our conduct be not such as to preserve the harmony, and order of our faculties, and the original frame and constitution of our minds : all true happiness, as all that is truly beautiful, can only result from order.

Whilst there is a conflict between the two principles of passion and reason, we must be miserable in proportion to the struggle ; and when the victory is gained, and reason so far subdued, as seldom to trouble us with its remonstrances, the happiness we have then is not the happiness of our rational nature, but the happiness only of the inferior and sensual part of us, and consequently a very low and imperfect happiness, to what the other would have afforded us.

If we reflect on any one passion and disposition of the mind, abstract from virtue, we shall soon see the disconnexion between that and true solid happiness. It is of the very essence, for instance, of envy, to be uneasy and disquieted. Pride meets with provocations and disturbances upon almost every occasion. Covetousness is ever attended with solicitude and anxiety. Ambition has its disappointments to sour us, but never the good fortune to satisfy us ; its appetite grows the keener by indulgence, and all we can gratify it with at present serves but the more to inflame its insatiable desires.

The passions, by being too much conversant with earthly objects, can never fix in us a proper composure and acquiescence of mind. Nothing but an indifference to the things of this world, an entire submission to the will of Providence here, and a well grounded expectation of happiness hereafter, can

give us' a true satisfactory enjoyment of ourselves. Virtue is the best guard against the many unavoidable evils incident to us ; nothing better alleviates the weight of the afflictions, or gives a truer relish of the blessings, of human life.

What is without us has not the least connexion with happiness, only so far as the preservation of our lives and health depends upon it. Health of body, though so far necessary that we cannot be perfectly happy without it, is not sufficient to make us happy of itself. Happiness springs immediately from the mind ; health is but to be considered as a candidate or circumstance, without which this happiness cannot be tasted pure and unabated.

Virtue is the best preservative of health, as it prescribes temperance, and such a regulation of our passions as is most conducive to the well being of the animal economy ; so that it is, at the same time, the only true happiness of the mind, and the best means of preserving the health of the body.

If our desires are to the things of this world, they are never to be satisfied ; if our great view is upon those of the next, the expectation of them is an infinitely higher satisfaction than the enjoyment of those of the present.

There is no happiness then but in a virtuous and self-approving conduct : unless our actions will bear the test of our sober judgment, and reflections upon them, they are not the actions, and consequently not the happiness, of a rational being.

ON DISCOVERIES.

*From the Pennsylvania Gazette, No. 409, Oct. 14,
1736.*

THE world, but a few ages since, was in a very poor condition as to trade and navigation; nor indeed were they much better in other matters of useful knowledge. It was a green-headed time; every useful improvement was hid from them; they had neither looked into heaven or earth, into sea nor land, as has been done since. They had philosophy without experiment, mathematics without instruments, geometry without scale, astronomy without demonstration.

They made war without powder, shot, cannon, or mortars; nay, the mob made their bonfires without squibs or crackers. They went to sea without compass, and sailed without the needle. They viewed the stars without telescopes, and measured latitudes without observation. Learning had no printing-press, writing no paper, and paper no ink: the lover was forced to send his mistress a deal board for a love-letter, and a *billet-doux* might be about the size of an ordinary trencher. They were clothed without manufacture, and their richest robes were the skins of the most formidable monsters: they carried on trade without books, and correspondence without posts: their merchants kept no accounts, their shopkeepers no cash-books: they had surgery without anatomy, and physicians without the *materia*

medica; they gave emetics without ipecacuanha, drew blisters without cantharides, and cured agues without the bark.

As for geographical discoveries, they had neither seen the North Cape, nor the Cape of Good Hope, south. All the discovered inhabited world which they knew and conversed with, was circumscribed within very narrow limits, viz. France, Britain, Spain, Italy, Germany, and Greece; the Lesser Asia, the west part of Persia, Arabia, the north parts of Africa, and the islands of the Mediterranean Sea; and this was the whole world to them. Not that even these countries were fully known either; and several parts of them were not inquired into at all. Germany was known little farther than the banks of the Elbe, Poland as little beyond the Vistula, or Hungary as little beyond the Danube; Muscovy or Russia perfectly unknown, as much as China beyond it; and India only by a little commerce upon the coast, about Surat and Malabar; Africa had been more unknown, but by the ruin of the Carthaginians; all the western coast of it was sunk out of knowledge again, and forgotten; the northern coast of Africa in the Mediterranean remained unknown, and that was all; for the Saracens, overrunning the nations which were planted there, ruined commerce as well as religion. The Baltic Sea was not discovered, nor even the navigation of it known; for the Teutonic Knights came not thither till the 12th century.

America was not heard of, nor so much as a suggestion in the minds of men that any part of the

world lay that way. The coasts of Greenland, or Spitsbergen, and the whale fishing, not known : the best navigators in the world, at that time, would have fled from a whale with much more fright and horror than from the devil, in the most terrible shapes they had been told he appeared in.

The coasts of Angola, Congo, the Gold and the Grain coasts, on the west of Africa, whence, since that time, such immense wealth has been drawn, not discovered, nor the least inquiry made after them. All the East India and China trade, not undiscovered, but out of the reach of expectation. Coffee and tea (those modern blessings of mankind) had never been heard of : all the unbounded ocean, we now call the South Sea, was hid and unknown ; all the Atlantic ocean, beyond the mouth of the Straits, was frightful and terrible in the distant prospects, nor durst any one peep into it, otherwise than as they might creep along the coast of Africa towards Sallee, or Santa Cruz. The North Sea was hid in a veil of impenetrable darkness ; the White Sea, or Archangel, was a very modern discovery, not found out till sir Hugh Willoughby doubled the North Cape, and paid dear for his adventure ; being frozen to death, with all his crew, on the coast of Lapland ; while his companion's ship, with the famous Mr. Chancellor, went on to the gulf of Russia, called the White Sea, where no Christian strangers had ever been before him.

In these narrow circumstances stood the world's knowledge at the beginning of the 13th century,

when men of genius began to look abroad and about them. Now as it was wonderful to see a world so full of people, and people so capable of improving, yet so stupid and so blind, so ignorant and so perfectly unimproved ; it was wonderful to see with what a general alacrity they took the alarm ; almost all together preparing themselves, as it were on a sudden, by a general inspiration, to spread knowledge through the earth, and to search into every thing that it was possible to uncover.

How surprising is it to look back so little a way behind us, and see that even in less than two hundred years, all this (now so self-wise) part of the world did not so much as know whether there was any such a place as a Russia, a China, a Guinea, a Greenland, or a North Cape ! that as to America, it was never supposed there was any such place ; neither had the world, though they stood upon the shoulders of four thousand years' experience, the least thought so much as that there was any land that way !

As they were ignorant of places, so of things also. So vast are the improvements of science, that all our knowledge of mathematics, of nature, of the brightest part of the human wisdom, had their admission among us within these last two centuries.

What was the world then before ? and to what were the heads and hands of mankind applied ? The rich had no commerce, the poor no employment ; war and the sword was the great field of honour, the stage of preferment ; and you have scarce a man eminent in the world for any thing before that time but for a furious outrageous falling upon his fellow-

creatures, like Nimrod, and his successors of modern memory.

The world is now daily increasing in experimental knowledge ; and let no man flatter the age, with pretending that we are arrived at a perfection of discoveries.

What's now discovered only serves to show
That nothing's known to what is yet to know.

THE WASTE OF LIFE.

*From the Pennsylvania Gazette, No. 404, Nov. 18,
1736.*

ANERGUS was a gentleman of good estate ; he was bred to no business, and could not contrive how to waste his hours agreeably : he had no relish for any of the proper works of life, nor any taste at all for the improvements of the mind ; he spent generally ten hours of the four-and-twenty in his bed ; he dozed away two or three more on his couch, and as many were dissolved in good liquor every evening, if he met with company of his own humour. Five or six of the rest he sauntered away with much indolence : the chief business of them was to contrive his meals, and to feed his fancy beforehand with the promise of a dinner or a supper. Not that he was so absolute a glutton, or so entirely devoted to appetite ; but chiefly because he knew not how to employ his thoughts better, he let them rove about the sustenance of his body. Thus he had made a shift so to wear off ten years since the paternal estate fell

into his hands ; and yet, according to the abuse of words in our day, he was called a man of virtue, because he was scarce ever known to be quite drunk, nor was his nature much inclined to lewdness.

One evening, as he was musing alone, his thoughts happened to take a most unusual turn ; for they cast a glance backward, and began to reflect upon his manner of life. He bethought himself what a number of living beings had been made a sacrifice to support his carcass, and how much corn and wine had been mingled with those offerings. He had not quite lost all the arithmetic he had learned when he was a boy, and he set himself to compute what he had devoured since he came to the age of man.

“ Fifty sheep have been sacrificed in a year, with half a becatomb of black cattle, that I might have the choicest part offered weekly upon my table. Thus a thousand beasts out of the flock and the herd have been slain in ten years’ time to feed me, besides what the forest has supplied me with. Many hundreds of fishes have, in all their varieties, been robbed of life for my repast, and of the smaller fry as many thousands.

“ A measure of corn would hardly afford me fine flour enough for a month’s provision, and this arises to above six score bushels ; and many hogsheds of ale and wine, and other liquors, have passed through this body of mine, this wretched strainer of meat and drink.

“ And what have I done all this time for God or man ? What a vast profusion of good things upon

an useless life and a worthless liver ! There is not the meanest creature among all these which I have devoured, but hath answered the end of its creation better than I. It was made to support human nature, and it hath done so. Every crab and oyster I have eat, and every grain of corn I have devoured, hath filled up its place in the rank of beings with more propriety and honour than I have done. O shameful waste of life and time !"

In short, he carried on his moral reflections with so just and severe a force of reason, as constrained him to change his whole course of life, to break off his follies at once, and to apply himself to gain some useful knowledge, when he was more than thirty years of age: he lived many following years with the character of a very worthy man, and an excellent Christian: he performed the kind offices of a good neighbour at home, and made a shining figure as a patriot in the senate-house: he died with a peaceful conscience, and the tears of his country were dropped upon his tomb.

The world, that knew the whole series of his life, stood amazed at the mighty change. They beheld him as a wonder of reformation, while he himself confessed and adored the Divine power and mercy, which had transformed him from a brute to a man.

But this was a single instance, and we may almost venture to write MIRACLE upon it. Are there numbers of both sexes among our young gentry, in this degenerate age, whose lives thus run to utter waste, without the least tendency to usefulness ?

When I meet with persons of such a worthless character as this, it brings to my mind some scraps of Horace:

"Nos numerus sumus, et fruges consumere nati.
 Alcinoque juvenus,
 Cui pulchrum fuit in medios dormire dies," &c.

Paraphrase.

There are a number of us creep
 Into this world to eat and sleep;
 And know no reason why they're born,
 But merely to consume the corn,
 Devour the cattle, fowl, and fish,
 And leave behind an empty dish;
 Though crows and ravens do the same,
 Unlucky birds of hateful name;
 Ravens or crows might fill their places,
 And swallow corn, and eat carcasses.
 Then if their tombstone, when they die,
 Ben't taught to flatter and to lie,
 There's nothing better will be said,
 Than that they've eat up all their bread,
 Drank all their drink, and gone to bed.

There are other fragments of that heathen poet, which occur on such occasions; one in the first of his Satires, the other in the last of his Epistles, which seem to represent life only as a season of luxury.

" . . . exacto contentus tempore vitæ,
 Cedat ubi conviva satur——
 Lusisti satis, edisti satis atque bibisti;
 Tempus abire tibi."

Which may be thus put into English :

Life's but a feast ; and when we die,
 Horace would say, if he were by—
 " Friend, thou hast eat and drunk enough ;
 'Tis time now to be marching off :
 Then, like a well-fed guest, depart
 With cheerful looks, and ease at heart ;
 Bid all your friends good night, and say
 You've done the business of the day."

THE WAY TO WEALTH.

*As clearly shown in the Preface of an old Pennsylvania Almanac, entitled, Poor Richard Improved.**

COURTEOUS READER,

I HAVE heard, that nothing gives an author so great pleasure as to find his works respectfully quoted by others. Judge, then, how much I must have been gratified by an incident I am going to relate to you. I stopped my horse lately, where a great number of people were collected, at an auction of merchants' goods. The hour of the sale not being come, they were conversing on the badness of the times ; and

* Dr. Franklin for many years published the Pennsylvania Almanac, called *Poor Richard*, (*Saunders*) and furnished it with various sentences and proverbs, which had principal relation to the topics of " industry, attention to one's own business, and frugality." The whole or chief of these sentences and proverbs he at last collected and digested in the above general preface, which his countrymen read with much avidity and profit.

one of the company called to a plain clean old man, with white locks, "Pray, father Abraham, what think you of the times? Will not these heavy taxes quite ruin the country? How shall we ever be able to pay them? What would you advise us to?"—Father Abraham stood up, and replied, "If you would have my advice, I will give it you in short; 'for a word to the wise is enough,' as Poor Richard says." They joined in desiring him to speak his mind, and, gathering round him, he proceeded as follows:

"Friends," says he, "the taxes are, indeed, very heavy, and if those laid on by the government were the only ones we had to pay, we might more easily discharge them; but we have many others, and much more grievous to some of us. We are taxed twice as much by our idleness, three times as much by our pride, and four times as much by our folly; and from these taxes the commissioners cannot ease or deliver us, by allowing an abatement. However, let us hearken to good advice, and something may be done for us: 'God helps them that help themselves,' as Poor Richard says.

"I. It would be thought a hard government that should tax its people one tenth part of their time, to be employed in its service: but idleness taxes many of us much more; sloth, by bringing on diseases, absolutely shortens life. 'Sloth, like rust, consumes faster than labour wears, while the used key is always bright,' as poor Richard says. 'But dost thou love life, then do not squander time, for that is the stuff life is made of,' as poor Richard says. How

much more than is necessary do we spend in sleep ! forgetting, that ' the sleeping fox catches no poultry, and that there will be sleeping enough in the grave,' as poor Richard says.

" ' If time be of all things the most precious, wasting time must be,' as poor Richard says, ' the greatest prodigality ;' since, as he elsewhere tells us, ' lost time is never found again; and what we call time enough always proves little enough :' let us then up and be doing, and doing to the purpose ; so by diligence shall we do more with less perplexity. ' Sloth makes all things difficult, but industry all easy ; and he that riseth late must trot all day, and shall scarce overtake his business at night ; while laziness travels so slowly, that poverty soon overtakes him. Drive thy business, let not that drive thee ; and early to bed, and early to rise, makes a man healthy, wealthy, and wise,' as poor Richard says.

" So what signifies wishing and hoping for better times ? We may make these times better, if we bestir ourselves. ' Industry need not wish, and he that lives upon hope will die fasting. There are no gains without pains ; then help hands, for I have no lands,' or, if I have, they are smartly taxed. ' He that hath a trade hath an estate ; and he that hath a calling hath an office of profit and honour,' as poor Richard says : but then the trade must be worked at, and the calling well followed, or neither the estate nor the office will enable us to pay our taxes. If we are industrious, we shall never starve ; for ' at the working man's house hunger looks in, but dares not enter.'

Nor will the bailiff or the constable enter; for 'industry pays debts, while despair increaseth them.' What though you have found no treasure, nor has any rich relation left you a legacy, 'diligence is the mother of good luck, and God gives all things to industry. Then plough deep while sluggards sleep, and you shall have corn to sell and to keep.' Work while it is called to-day, for you know not how much you may be hindered to-morrow. 'One to-day is worth two to-morrows,' as poor Richard says; and farther, 'never leave that till to-morrow which you can do to-day.' If you were a servant, would you not be ashamed that a good master should catch you idle? Are you then your own master? Be ashamed to catch yourself idle, when there is so much to be done for yourself, your family, your country, and your king. Handle your tools without mittens; remember, that 'the cat in gloves catches no mice,' as poor Richard says. It is true, there is much to be done, and perhaps you are weak-handed; but stick to it steadily, and you will see great effects; for 'constant dropping wears away stones; and by diligence and patience the mouse ate in two the cable; and little strokes fell great oaks.'

"Methinks I hear some of you say, 'must a man afford himself no leisure?' I will tell thee, my friend, what poor Richard says: 'employ thy time well, if thou meanest to gain leisure; and since thou art not sure of a minute, throw not away an hour.' Leisure is time for doing something useful; this leisure the diligent man will obtain, but the lazy man never;

for 'a life of leisure and a life of laziness are two things. Many, without labour, would live by their wits only, but they break for want of stock ;' whereas industry gives comfort, and plenty, and respect. ' Fly pleasures, and they will follow you. The diligent spinner has a large shift ; and now I have a sheep and a cow, every body bids me good-morrow.'

" II But with our industry we must likewise be steady, settled, and careful, and oversee our own affairs with our own eyes, and not trust too much to others ; for, as poor Richard says,

' I never saw an oft-reinoved tree,
Nor yet an oft-reinoved family,
That throve; so well as those that settled be.'

And again, ' three removes are as bad as a fire ;' and again, ' keep thy shop, and thy shop will keep thee ;' and again, ' if you would have your business done, go ; if not, send.' And again,

' He that by the plough would thrive,
Himself must either hold or drive.'

And again, ' the eye of a master will do more work than both his hands ;' and again, ' want of care does us more damage than want of knowledge ;' and again, ' not to oversee workmen is to leave them your purse open.' Trusting too much to others' care is the ruin of many ; for, ' in the affairs of this world, men are saved, not by faith, but by the want of it ;' but a man's own care is profitable ; for ' if

you would have a faithful servant, and one that you like, serve yourself. A little neglect may breed great mischief; for want of a nail the shoe was lost, and for want of a shoe the horse was lost, and for want of a horse the rider was lost, being overtaken and slain by the enemy; all for want of a little care about a horse-shoe nail.

“ III. So much for industry, my friends, and attention to one’s own business; but to these we must add frugality, if we would make our industry more certainly successful. A man may, if he knows not how to save as he gets, ‘ keep his nose all his life to the grind-stone, and die not worth a groat at last. A fat kitchen makes a lean will;’ and

‘ Many estates are spent in the getting,
Since women for tea forsook spinning and knitting,
And men for punch forsook hewing and splitting.’

‘ If you would be wealthy, think of saving as well as of getting. The Indies have not made Spain rich, because her outgoes are greater than her incomes.’

“ Away, then, with your expensive follies, and you will not then have so much cause to complain of hard times, heavy taxes, and chargeable families; for

‘ Women and wine, game and deceit,
Make the wealth small, and the want great.’

And farther, ‘ what maintains one vice would bring up two children.’ You may think, perhaps, that a little tea, or a little punch now and then, diet a little

more costly, clothes a little finer, and a little entertainment now and then, can be no great matter ; but remember, ' many a little makes a mickle.' Beware of little expenses ; ' a small leak will sink a great ship,' as poor Richard says ; and again, ' who dainties love shall beggars prove ;' and moreover, ' fools make feasts, and wise men eat them.'

" Here you are all got together to this sale of fineries and nick-nacks. You call them *goods*, but if you do not take care, they will prove *evils* to some of you. You expect they will be sold cheap, and perhaps they may, for less than they cost ; but, if you have no occasion for them, they must be dear to you. Remember what poor Richard says, ' buy what thou hast no need of, and ere long thou shalt sell thy necessaries.' And again, ' at a great pennyworth pause awhile.' He means, that perhaps the cheapness is apparent only, and not real ; or the bargain, by straitening thee in thy business, may do thee more harm than good : for in another place he says, ' many have been ruined by buying good pennyworths.' Again, ' it is foolish to lay out money in a purchase of repentance ;' and yet this folly is practised every day at auctions, for want of minding the almanac. Many a one, for the sake of finery on the back, have gone with a hungry belly, and half starved their families : ' silks and satins, scarlet and velvets, put out the kitchen fire,' as poor Richard says. These are not the necessaries of life, they can scarcely be called the conveniences ; and yet, only because they look pretty, how many want to

have them ! By these and other extravagancies, the genteel are reduced to poverty, and forced to borrow of those whom they formerly despised, but who, through industry and frugality, have maintained their standing ; in which case it appears plainly, that ' a ploughman on his legs is higher than a gentleman on his knees,' as poor Richard says. Perhaps they have had a small estate left them, which they knew not the getting of ; they think ' it is day, and will never be night ;' that a little to be spent out of so much is not worth minding : but ' always taking out of the meal-tub, and never putting in, soon comes to the bottom,' as poor Richard says ; and then, ' when the well is dry, they know the worth of water.' But this they might have known before, if they had taken his advice : ' if you would know the value of money, go and try to borrow some ; for he that goes a borrowing goes a sorrowing,' as poor Richard says ; and indeed so does he that lends to such people, when he goes to get it in again. Poor Dick farther advises, and says,

' Fond pride of dress is sure a very curse :
Ere fancy you consult, consult your purse.'

And again, ' pride is as loud a beggar as want, and a great deal more saucy.' When you have bought one fine thing, you must buy ten more, that your appearance may be all of a piece ; but poor Dick says, ' it is easier to suppress the first desire than to satisfy all that follow it :' and it is as truly folly for

the poor to ape the rich, as for the frog to swell, in order to equal the ox.

‘Vessels large may venture more,
But little boats should keep near shore.’

It is, however, a folly soon punished ; for, as poor Richard says, ‘pride that dines on vanity, sups on contempt ; pride breakfasted with plenty, dined with poverty, and supped with infamy.’ And, after all, of what use is this pride of appearance, for which so much is risked, so much is suffered ? It cannot promote health, nor ease pain ; it makes no increase of merit in the person ; it creates envy, it hastens misfortune.

“But what madness must it be to *run in debt* for these superfluities ! We are offered, by the terms of this sale, six months’ credit ; and that, perhaps, has induced some of us to attend it, because we cannot spare the ready money, and hope now to be fine without it. But ah ! think what you do when you run in debt ; you give to another power over your liberty. If you cannot pay at the time, you will be ashamed to see your creditor ; you will be in fear when you speak to him ; you will make poor, pitiful, sneaking excuses, and, by degrees, come to lose your veracity, and sink into base, downright lying ; for ‘the second vice is lying, the *first* is running in debt,’ as poor Richard says ; and again to the same purpose, lying rides upon debt’s back ;’ whereas a free-born Englishman ought not to be ashamed nor afraid to see or

speaking to any man living. But poverty often deprives a man of all spirit and virtue. 'It is hard for an empty bag to stand upright.' 'What would you think of that Prince, or of that government, who should issue an edict, forbidding you to dress like a gentleman or gentlewoman, on pain of imprisonment or servitude? Would you not say, that you were free, have a right to dress as you please, and that such an edict would be a breach of your privileges, and such a government tyrannical? And yet you are about to put yourself under that tyranny, when you run in debt for such dress! your creditor has authority, at his pleasure, to deprive you of your liberty, by confining you in gaol for life, or by selling you for a servant, if you should not be able to pay him. When you have got your bargain, you may, perhaps, think little of payment; but, as poor Richard says, 'creditors have better memories than debtors; creditors are a superstitious sect, great observers of set days and times.' The day comes round before you are aware, and the demand is made before you are prepared to satisfy it; or, if you bear your debt in mind, the term, which at first seemed so long, will, as it lessens, appear extremely short: Time will seem to have added wings to his heels as well as his shoulders. 'Those have a short Lent who owe money to be paid at Easter.' At present, perhaps, you may think yourselves in thriving circumstances, and that you can bear a little extravagance without injury; but

'For age and want save while you may ;
No morning sun lasts a whole day.'

Gain may be temporary and uncertain, but ever, while you live, expense is constant and certain ; and it is 'easier to build two chimneys than to keep one fuel,' as poor Richard says : so 'rather go to bed supperless than rise in debt.'

'Get what you can, and what you get hold :
'Tis the stone that will turn all your lead into gold.'

And when you have got the philosopher's stone, sure you will no longer complain of bad times, or the difficulty of paying taxes.

"IV. This doctrine, my friends, is reason and wisdom : but, after all, do not depend too much upon your own industry, and frugality, and prudence, though excellent things ; for they may all be blasted, without the blessing of Heaven : and therefore ask that blessing humbly ; and be not uncharitable to those that at present seem to want it, but comfort and help them. Remember Job suffered, and was afterwards prosperous.

"And now, to conclude, 'Experience keeps a dear school, but fools will learn in no other,' as poor Richard says, and scarce in that ; for it is true 'we may give advice, but we cannot give conduct ; however, remember this : 'they that will not be counselled cannot be helped ;' and farther, that 'if you will not hear Reason, she will surely rap your knuckles,' as poor Richard says."

Thus the old gentleman ended his harangue. The people heard it, and approved the doctrine ; and immediately practised the contrary, just as if it had been a common sermon ; for the auction opened, and they began to buy extravagantly. I found the good man had thoroughly studied my almanacs, and digested all I had dropped on those topics during the course of twenty-five years. The frequent mention he made of me must have tired any one else ; but my vanity was wonderfully delighted with it, though I was conscious that not a tenth part of the wisdom was my own which he ascribed to me, but rather the gleanings that I had made of the sense of all ages and nations. However, I resolved to be the better for the echo of it ; and though I had at first determined to buy stuff for a new coat, I went away, resolved to wear my old one a little longer. Reader, if thou wilt do the same, thy profit will be as great as mine. I am, as ever, thine to serve thee,

RICHARD SAUNDERS.

NECESSARY HINTS TO THOSE THAT WOULD BE RICH.

Written anno 1736.

THE use of money is all the advantage there is in having money.

For six pounds a year you may have the use of one hundred pounds, provided you are a man of known prudence and honesty.

He that spends a groat a day idly, spends idly

above six pounds a year, which is the price for the use of one hundred pounds.

He that wastes idly a groat's worth of his time per day, one day with another, wastes the privilege of using one hundred pounds each day.

He that idly loses five shillings worth of time, loses five shillings, and might as prudently throw five shillings into the sea.

He that loses five shillings, not only loses that sum, but all the advantage that might be made by turning it in dealing, which, by the time that a young man becomes old, will amount to a considerable sum of money.

Again : he that sells upon credit, asks a price for what he sells equivalent to the principal and interest of his money for the time he is to be kept out of it ; therefore, he that buys upon credit pays interest for what he buys ; and he that pays ready money, might let that money out to use : so that he that possesses any thing he has bought, pays interest for the use of it.

Yet, in buying goods, it is best to pay ready money, because he that sells upon credit, expects to lose five per cent. by bad debts ; therefore he charges on all he sells upon credit, an advance that shall make up that deficiency.

Those who pay for what they buy upon credit, pay their share of this advance.

He that pays ready money, escapes, or may escape, that charge.

A penny saved is twopence clear ;
A pin a day's a groat a year.

ADVICE TO A YOUNG TRADESMAN.

Written anno 1748.

To my friend A. B.

As you have desired it of me, I write the following hints, which have been of service to me, and may, if observed, be so to you.

REMEMBER that *time* is money. He that can earn ten shillings a day by his labour, and goes abroad, or sits idle one half of that day, though he spends but sixpence during his diversion or idleness, ought not to reckon *that* the only expense; he has really spent, or rather thrown away, five shillings besides.

Remember that *credit* is money. If a man lets his money lie in my hands after it is due, he gives me the interest, or so much as I can make of it, during that time. This amounts to a considerable sum where a man has good and large credit, and makes good use of it.

Remember that money is of a prolific generating nature. Money can beget money, and its offspring can beget more, and so on. Five shillings turned is six, turned again it is seven and threepence, and so on, till it becomes an hundred pounds. The more there is of it, the more it produces every turning, so that the profits rise quicker and quicker. He that kills a breeding sow destroys all her offspring to the thousandth generation. He that murders a crown

destroys all that it might have produced, even scores of pounds.

Remember that six pounds a year is but a groat a day. For this little sum (which may be daily wasted either in time or expense unperceived) a man of credit may, on his own security, have the constant possession and use of an hundred pounds. So much in stock, briskly turned by an industrious man, produces great advantage.

Remember this saying, "the good paymaster is lord of another man's purse." He that is known to pay punctually and exactly to the time he promises, may, at any time, and on any occasion, raise all the money his friends can spare. This is sometimes of great use. After industry and frugality, nothing contributes more to the raising of a young man in the world than punctuality and justice in all his dealings : therefore never keep borrowed money an hour beyond the time you promised, lest a disappointment shut up your friend's purse for ever.

The most trifling actions that affect a man's credit are to be regarded. The sound of your hammer at five in the morning, or nine at night, heard by a creditor, makes him easy six months longer : but if he sees you at a billiard table, or hears your voice at a tavern, when you should be at work, he sends for his money the next day—demands it before he can receive it in a lump.

It shows, besides, that you are mindful of what you owe ; it makes you appear a careful as well as an honest man, and that still increases your credit.

Beware of thinking all your own that you possess, and of living accordingly. It is a mistake that many people who have credit fall into. To prevent this, keep an exact account, for some time, both of your expenses and your income. If you take the pains at first to mention particulars, it will have this good effect: you will discover how wonderfully small trifling expenses mount up to large sums, and will discern what might have been, and may for the future be saved, without occasioning any great inconvenience.

In short, the way to wealth, if you desire it, is as plain as the way to market. It depends chiefly on two words, *industry* and *frugality*; that is, waste neither *time* nor *money*, but make the best use of both. Without industry and frugality nothing will do, and with them every thing. He that gets all he can honestly, and saves all he gets (necessary expenses excepted,) will certainly become *rich*—if that Being who governs the world, to whom all should look for a blessing on their honest endeavours, doth not, in his wise providence, otherwise determine.

AN OLD TRADESMAN.

THE WAY TO MAKE MONEY PLENTY IN EVERY MAN'S POCKET.

At this time, when the general complaint is that "money is scarce," it will be an act of kindness to inform the moneyless how they may reinforce their pockets. I will acquaint them with the true secret of money-catching, the certain way to fill empty

purses, and how to keep them always full. Two simple rules, well observed, will do the business.

First, let honesty and industry be thy constant companions; and

Secondly, spend one penny less than thy clear gains.

Then shall thy hide-bound pocket soon begin to thrive, and will never again cry with the empty belly-ache: neither will creditors insult thee, nor want oppress, nor hunger bite, nor nakedness freeze thee. The whole hemisphere will shine brighter, and pleasure spring up in every corner of thy heart. Now, therefore, embrace these rules and be happy. Banish the bleak winds of sorrow from thy mind, and live independent. Then shalt thou be a man, and not hide thy face at the approach of the rich, nor suffer the pain of feeling little when the sons of fortune walk at thy right hand: for independency, whether with little or much, is good fortune, and placeth thee on even ground with the proudest of the golden fleece. Oh, then, be wise, and let industry walk with thee in the morning, and attend thee until thou reachest the evening hour for rest. Let honesty be as the breath of thy soul, and never forget to have a penny when all thy expenses are enumerated and paid: then shalt thou reach the point of happiness, and independence shall be thy shield and buckler, thy helmet and crown; then shall thy soul walk upright, nor stoop to the silken wretch because he hath riches, nor pocket an abuse because the hand which offers it wears a ring set with diamonds.

NEW MODE OF LENDING MONEY.

Paris, April 22, 1784.

I SEND you herewith a bill for ten louis d'ors. I do not pretend to give such a sum. I only *lend* it to you. When you shall return to your country, you cannot fail getting into some business, that will in time enable you to pay all your debts. In that case, when you meet with another honest man in similar distress, you must *pay me* by lending this sum to him, enjoining him to *discharge the debt* by a like operation, when he shall be able, and shall meet with such another opportunity. I hope it may thus go through many hands before it meet with a *knave* to stop its progress. This is a trick of mine for doing a good deal with a little money. I am not rich enough to afford *much* in good works, and so am obliged to be cunning and make the most of a *little*.

B FRANKLIN.

AN ECONOMICAL PROJECT.

To the Authors of the Journal.

MESSIEURS,

You often entertain us with accounts of new discoveries. Permit me to communicate to the public, through your paper, one, that has lately been made by myself, and which I conceive may be of great utility.

I was the other evening in a grand company, where the new lamp of Messrs. Quinquet and Lange was introduced, and much admired for its splendour ; but a general inquiry was made, whether the oil it consumed was not in proportion to the light it afforded, in which case there would be no saving in the use of it. No one present could satisfy us in that point, which all agreed ought to be known ; it being a very desirable thing to lessen, if possible, the expense of lighting our apartments, when every other article of family expense was so much augmented.

I was pleased to see this general concern for economy—for I love economy exceedingly.

I went home, and to bed, three or four hours after midnight, with my head full of the subject. An accidental sudden noise waked me about six in the morning, when I was surprised to find my room filled with light ; and I imagined at first that a number of those lamps had been brought into it ; but, rubbing my eyes, I perceived the light came in at the windows. I got up, and looked out to see what might be the occasion of it, when I saw the sun just rising above the horizon, from whence he poured his rays plentifully into my chamber, my domestic having negligently omitted the preceding evening to close the shutters.

I looked at my watch, which goes very well, and found that it was but six o'clock ; and still thinking it something extraordinary that the sun should rise so early, I looked into the almanac, where I found

it to be the hour given for his rising on that day. I looked forward too, and found he was to rise still earlier every day till towards the end of June ; and that at no time in the year he retarded his rising so long as till eight o'clock. Your readers, who with me have never seen any signs of sunshine before noon, and seldom regard the astronomical part of the almanac, will be as much astonished as I was, when they hear of his rising so early ; and especially when I assure them, *that he gives light as soon as he rises*. I am convinced of this I am certain of my fact. One cannot be more certain of any fact. I saw it with my own eyes. And, having repeated this observation the three following mornings, I found always precisely the same result.

Yet so it happens, that when I speak of this discovery to others, I can easily perceive by their countenances, though they forbear expressing it in words, that they do not quite believe me. One, indeed, who is a learned natural philosopher, has assured me, that I must certainly be mistaken as to the circumstance of the light coming into my room ; for it being well known, as he says, that there could be no light abroad at that hour, it follows that none could enter from without ; and that of consequence, my windows being accidentally left open, instead of letting in the light, had only served to let out the darkness ; and he used many ingenious arguments to show me how I might, by that means, have been deceived. I own that he puzzled me a little, but he did not

satisfy me ; and the subsequent observations I made, as above-mentioned, confirmed me in my first opinion.

This event has given rise in my mind to several serious and important reflections. I considered that, if I had not been awakened so early in the morning, I should have slept six hours longer by the light of the sun, and in exchange have lived six hours the following night by candle-light ; and the latter being a much more expensive light than the former, my love of economy induced me to muster up what little arithmetic I was master of, and to make some calculations, which I shall give you, after observing that utility is, in my opinion, the test of value in matters of invention, and that a discovery which can be applied to no use, or is not good for something, is good for nothing.

I took for the basis of my calculation the supposition that there are 100,000 families in Paris, and that these families consume in the night half a pound of bougies, or candles per hour. I think this is a moderate allowance, taking one family with another ; for though I believe some consume less, I know that many consume a great deal more. Then estimating seven hours per day, as the medium quantity between the time of the sun's rising and ours, he rising during the six following months from six to eight hours before noon, and there being seven hours of course per night in which we burn candles, the account will stand thus :—

In the six months between the twentieth of March and the twentieth of September, there are

Nights	-	-	-	183
Hours of each night in which we burn candles	-	-	-	7

Multiplication gives for the total number of hours - - - 1,281

These 1,281 hours multiplied by 100,000, the number of inhabitants, give - - - 128,100,000

One hundred twenty-eight millions and one hundred thousand hours spent at Paris by candle-light, Which, at half a pound of wax and tallow per hour, gives the weight of - - - 64,050,000

Sixty-four millions and fifty thousand of pounds, which, estimating the whole at the medium price of thirty sols the pound, makes the sum of ninety-six millions and seventy-five thousand livres tournois - - - 96,075,600

An immense sum ! that the city of Paris might save every year, by the economy of using sunshine instead of candles.

If it should be said, that people are apt to be obstinately attached to old customs, and that it will be difficult to induce them to rise before noon, consequently my discovery can be of little use ; I answer,

Nul desperandum. I believe all who have common sense, as soon as they have learned from this paper that it is day-light when the sun rises, will contrive to rise with him ; and, to compel the rest, I would propose the following regulations :

First. Let a tax be laid of a louis per window, on every window that is provided with shutters to keep out the light of the sun.

Second. Let the same salutary operation of police be made use of to prevent our burning candles, that inclined us last winter to be more economical in burning wood ; that is, let guards be placed in the shops of the wax and tallow chandlers, and no family be permitted to be supplied with more than one pound of candles per week.

Third. Let guards also be posted to stop all the coaches, &c. that would pass the streets after sunset, except those of physicians, surgeons, and midwives.

Fourth. Every morning, as soon as the sun rises, let all the bells at every church be set ringing ; and if that is not sufficient, let cannon be fired in every street, to wake the sluggards effectually, and make them open their eyes to see their true interest.

All the difficulty will be in the first two or three days ; after which the reformation will be as natural and easy as the present irregularity ; for, *ce n'est que le premier pas qui coule*. Oblige a man to rise at four in the morning, and it is more than probable he shall go willingly to bed at eight in the evening ; and having had eight hours' sleep, he will rise more will-

ingly at four the morning following. But this sum of ninety-six millions and seventy-five thousand livres is not the whole of what may be saved by my economical project. You may observe, that I have calculated upon only one half of the year, and much may be saved in the other, though the days are shorter. Besides, the immense stock of wax and tallow left unconsumed during the summer will probably make candles much cheaper for the ensuing winter, and continue them cheaper as long as the proposed reformation shall be supported.

For the great benefit of this discovery, thus freely communicated and bestowed by me on the public, I demand neither place, pension, exclusive privilege, nor any other reward whatever. I expect only to have the honour of it. And yet I know there are little envious minds who will, as usual, deny me this, and say, that my invention was known to the ancients, and perhaps they may bring passages out of the old books in proof of it. I will not dispute with these people, that the ancients knew not the sun would rise at certain hours ; they possibly had, as we have, almanacs that predicted it : but it does not follow from thence, that they knew *he gave light as soon as he rose*. This is what I claim as my discovery. If the ancients knew it, it might have been long since forgotten ; for it certainly was unknown to the moderns, at least to the Parisians, which to prove, I need use but one plain simple argument. They are as well-instructed, judicious, and prudent a people as exist any where in the world, all professing, like my-

self, to be lovers of economy ; and, from the many heavy taxes required from them by the necessities of the state, have surely an abundant reason to be economical. I say it is impossible, that so sensible a people, under such circumstances, should have lived so long by the smoky, unwholesome, and enormously expensive light of candles, if they had really known, that they might have had as much pure light of the sun for nothing.

I am, &c.

AN ABONNE.

ON EARLY MARRIAGES.

To John Alleyne, Esq.

Craven Street, Aug. 8, 1768.

DEAR JACK,

You desire, you say, my impartial thoughts on the subject of an early marriage, by way of answer to the numberless objections that have been made by numberless persons to your own. You may remember, when you consulted me on the occasion, that I thought youth on both sides to be no objection. Indeed, from the marriages that have fallen under my observation, I am rather inclined to think, that early ones stand the best chance of happiness. The temper and habits of the young are not yet become so stiff and uncomplying, as when more advanced in life ; they form more easily to each other, and hence many occasions of disgust are removed : and if youth has less of that prudence which is necessary to manage a family, yet the parents and elder friends of

young married persons are generally at hand to afford their advice, which amply supplies that defect and by early marriage, youth is sooner formed to regular and useful life ; and possibly some of those accidents or connexions, that might have injured the constitution or reputation, or both, are thereby happily prevented. Particular circumstances of particular persons may possibly sometimes make it prudent to delay entering into that state ; but in general, when nature has rendered our bodies fit for it, the presumption is in nature's favour, that she has not judged amiss in making us desire it. Late marriages are often attended, too, with this farther inconvenience, that there is not the same chance that the parents shall live to see their offspring educated. " Late children," says the Spanish proverb, " are early orphans." A melancholy reflection to those whose case it may be ! With us in America, marriages are generally in the morning of life ; our children are, therefore, educated and settled in the world by noon ; and thus, our business being done, we have an afternoon and evening of cheerful leisure to ourselves, such as our friend at present enjoys. By these early marriages we are blessed with more children ; and from the mode among us, founded by nature, of every mother suckling and nursing her own child, more of them are raised. Thence the swift progress of population among us, unparalleled in Europe. In fine, I am glad you are married, and congratulate you most cordially upon it. You are now in the way of becoming a useful citizen ; and you have escaped the

unnatural state of celibacy for life—the fate of many here, who never intended it, but who, having too long postponed the change of their condition, find, at length, that it is too late to think of it, and so live all their lives in a situation that greatly lessens a man's value. An odd volume of a set of books bears not the value of its proportion to the set: what think you of the odd half of a pair of scissors? it cannot well cut any thing; it may possibly serve to scrape a trencher.

Pray make my compliments and best wishes acceptable to your bride. I am old and heavy, or I should ere this have presented them in person. I shall make but small use of the old man's privilege, that of giving advice to younger friends. Treat your wife always with respect: it will procure respect to you, not only from her, but from all that observe it. Never use a slighting expression to her, even in jest; for slights in jest, after frequent bandyings, are apt to end in angry earnest. Be studious in your profession, and you will be learned. Be industrious and frugal, and you will be rich. Be sober and temperate, and you will be healthy. Be in general virtuous, and you will be happy. At least, you will, by such conduct, stand the best chance for such consequences. I pray God to bless you both; being ever your affectionate friend,

B. FRANKLIN.

EFFECT OF EARLY IMPRESSIONS ON THE MIND.

To Doctor Mather of Boston.

REV. SIR,

I RECEIVED your kind letter, with your excellent advice to the people of the United States, which I read with great pleasure, and hope it will be duly regarded. Such writings, though they may be lightly passed over by many readers, yet, if they make a deep impression on one active mind in a hundred, the effects may be considerable.

Permit me to mention one little instance, which, though it relates to myself, will not be quite uninteresting to you. When I was a boy, I met with a book entitled "Essays to do good," which I think was written by your father. It had been so little regarded by a former possessor, that several leaves of it were torn out; but the remainder gave me such a turn of thinking as to have an influence on my conduct through life: for I have always set a greater value on the character of a deer of good than any other kind of reputation; and if I have been, as you seem to think, a useful citizen, the public owes the advantage of it to that book.

You mention your being in your seventy-eighth year. I am in my seventy-ninth. We are grown old together. It is now more than sixty years since I left Boston; but I remember well both your father and grandfather, having heard them both in the pul-

pit, and seen them in their houses. The last time I saw your father was in the beginning of 1724, when I visited him after my first trip to Pennsylvania. He received me in his library; and, on my taking leave, showed me a shorter way out of the house, through a narrow passage, which was crossed by a beam overhead. We were still talking as I withdrew, he accompanying me behind, and I turning partly towards him, when he said hastily, "Stoop, stoop!" I did not understand him, till I felt my head hit against the beam. He was a man who never missed any occasion of giving instruction; and upon this he said to me, "You are young, and have the world before you: stoop as you go through it, and you will miss many hard thumps." This advice, thus beat into my heart, has frequently been of use to me: and I often think of it, when I see pride mortified, and misfortunes brought upon people by their carrying their heads too high.

I long much to see again my native place; and once hoped to lay my bones there. I left it in 1723, I visited it in 1733, 1743, 1753, and 1763; and in 1773 I was in England. In 1776 I had a sight of it, but could not enter, it being in possession of the enemy. I did hope to have been there in 1783, but could not obtain my dismissal from this employment here; and now I fear I shall never have that happiness. My best wishes, however, attend my dear country—*esto perpetua*. It is now blessed with an excellent constitution: may it last for ever.

This powerful monarchy continues its friendship for the United States. It is a friendship of the ut-

most importance to our security, and should be carefully cultivated. Britain has not yet well digested the loss of its dominion over us, and has still at times some flattering hopes of recovering it. Accidents may increase those hopes, and encourage dangerous attempts. A breach between us and France would infallibly bring the English again upon our backs; and yet we have some wild beasts among our countrymen, who are endeavouring to weaken that connexion.

Let us preserve our reputation, by performing our engagements; our credit, by fulfilling our contracts; and our friends, by gratitude and kindness: for we know not how soon we may again have occasion for all of them.

With great and sincere esteem,

I have the honour to be,

Reverend Sir,

Your most obedient and most humble servant,

B. FRANKLIN.

Passy, May 12, 1784.

THE WHISTLE.

Passy, Nov. 10, 1779.

I RECEIVED my dear friend's two letters, one for Wednesday, and one for Saturday. This is again Wednesday. I do not deserve one for to-day, because I have not answered the former. But indolent as I am, and averse to writing, the fear of having no more of your pleasing epistles, if I do not contribute to the correspondence, obliges me to take up my pen;

and, as Mr. B. has kindly sent me word that he sets out to-morrow to see you, instead of spending this Wednesday evening, as I have done its namesakes, in your delightful company, I sit down to spend it in thinking of you, in writing to you, and in reading over and over again your letters.

I am charmed with your description of Paradise, and with your plan of living there; and I approve much of your conclusion, that, in the mean time, we should draw all the good we can from this world. In my opinion, we might all draw more good from it than we do, and suffer less evil, if we would but take care not to give too much for *whistles*. For to me it seems that most of the unhappy people we meet with are become so by neglect of that caution.

You ask what I mean. You love stories, and will excuse my telling one of myself.

When I was a child, at seven years old, my friends, on a holiday, filled my pocket with coppers. I went directly to a shop where they sold toys for children; and being charmed with the sound of a *whistle* that I met by the way in the hands of another boy, I voluntarily offered him all my money for it. I then came home, and went whistling all over the house, much pleased with my *whistle*, but disturbing all the family. My brothers, and sisters, and cousins, understanding the bargain I had made, told me I had given four times as much for it as it was worth. This put me in mind what good things I might have bought with the rest of the money; and they laughed at me

so much for my folly, that I cried with vexation ; and the reflection gave me more chagrin than the *whistle* gave me pleasure.

This, however, was afterwards of use to me, the impression continuing on my mind ; so that often, when I was tempted to buy some unnecessary thing, I said to myself, " Don't give too much for the *whistle* ;" and so I saved my money.

As I grew up, came into the world, and observed the actions of men, I thought I met with many, very many, who gave too much for the *whistle*.

When I saw any one too ambitious of court favours, sacrificing his time in attendance on levees, his repose, his liberty, his virtue, and perhaps his friends, to attain it, I have said to myself, " This man gives too much for his *whistle*."

When I saw another fond of popularity, constantly employing himself in political bustles, neglecting his own affairs, and ruining them by that neglect, " He pays, indeed," says I, " too much for his *whistle*."

If I knew a miser, who gave up every kind of comfortable living, all the pleasure of doing good to others, all the esteem of his fellow-citizens, and the joys of benevolent friendship, for the sake of accumulating wealth, " Poor man," says I, " you pay too much for your *whistle*."

When I meet a man of pleasure sacrificing every laudable improvement of the mind or of his fortune, to mere corporeal sensations, and ruining his health in their pursuit, " Mistaken man says I, " you are

providing pain for yourself, instead of pleasure : you give too much for your *whistle*."

If I see one fond of appearance, of fine clothes, fine houses, fine furniture, fine equipages, all above his fortune, for which he contracts debts, and ends his career in a prison, "Alas," says I, "he has paid dear, very dear, for his *whistle*."

When I see a beautiful, sweet-tempered girl married to an ill-natured brute of a husband, "What a pity it is," says I, "that she has paid so much for a *whistle* !"

In short, I conceived that great part of the miseries of mankind were brought upon them by the false estimates they had made of the value of things, and by their giving too much for their *whistles*.

Yet I ought to have charity for these unhappy people, when I consider, that, with all this wisdom of which I am boasting, there are certain things in the world so tempting, (for example, the apples of king John,) which happily are not to be bought ; for if they were put to sale by auction, I might very easily be led to ruin myself in the purchase, and find that I had once more given too much for the *whistle*.

Adieu, my dearest friend, and believe me ever yours very sincerely, and with unalterable affection,

B. FRANKLIN.

A PETITION TO THOSE WHO HAVE THE SUPERINTENDENCY OF EDUCATION.

I ADDRESS myself to all the friends of youth, and conjure them to direct their compassionate regards

to my unhappy fate, in order to remove the prejudices of which I am the victim. There are twin sisters of us: and the two eyes of man do not more resemble, nor are capable of being upon better terms with each other than my sister and myself, were it not for the partiality of our parents, who make the most injurious distinctions, between us. From my infancy, I have been led to consider my sister as a being of a more elevated rank. I was suffered to grow up without the least instruction, while nothing was spared in her education. She had masters to teach her writing, drawing, music, and other accomplishments; but if by chance I touched a pencil, a pen, or a needle, I was bitterly rebuked; and more than once I have been beaten for being awkward and wanting a graceful manner. It is true, my sister associated me with her upon some occasions; but she always made a point of taking the lead, calling upon me only from necessity, or to figure by her side.

But conceive not, sirs, that my complaints are instigated merely by vanity.—No; my uneasiness is occasioned by an object much more serious. It is the practice in our family that the whole business of providing for its subsistence falls upon my sister and myself. If any indisposition should attack my sister, and I mention it in confidence upon this occasion, that she is subject to the gout, the rheumatism, and cramp, without making mention of other accidents, what would be the fate of our poor family? Must not the regret of our parents be excessive, at having placed so great a difference between sisters who are

so perfectly equal? Alas! we must perish from distress; for it would not be in my power even to scrawl a suppliant petition for relief, having been obliged to employ the hand of another in transcribing the request which I have now the honour to prefer to you.

Condescend, sirs, to make my parents sensible of the injustice of an exclusive tenderness, and of the necessity of distributing their care and affection among all their children equally.

I am, with a profound respect,

Sirs,

Your obedient servant,

THE LEFT HAND.

THE HANDSOME AND DEFORMED LEG.

THERE are two sorts of people in the world, who, with equal degrees of health and wealth, and the other comforts of life, become, the one happy, and the other miserable. This arises very much from the different views in which they consider things, persons, and events; and the effect of those different views upon their own minds.

In whatever situation men can be placed, they may find conveniences and inconveniences; in whatever company, they may find persons and conversation more or less pleasing; at whatever table, they may meet with meats and drinks of better and worse taste, dishes better and worse dressed; in whatever climate they will find good and bad weather; under whatever government, they may find

good and bad laws, and good and bad administration of those laws ; in whatever poem, or work of genius, they may see faults and beauties ; in almost every face, and every person, they may discover fine features and defects, good and bad qualities.

Under these circumstances, the two sorts of people above mentioned fix their attention ; those who are disposed to be happy, on the conveniences of things, the pleasant parts of conversation, the well-dressed dishes, the goodness of the wines, the fine weather, &c. and enjoy all with cheerfulness. Those who are to be unhappy, think and speak only of the contraries. Hence they are continually discontented themselves, and, by their remarks, sour the pleasures of society, offend personally many people, and make themselves every where disagreeable. If this turn of mind was founded in nature, such unhappy persons would be the more to be pitied. But as the disposition to criticise, and to be disgusted, is, perhaps, taken up originally by imitation, and is, unawares, grown into a habit, which, though at present strong, may nevertheless be cured, when those who have it are convinced of its bad effects on their felicity ; I hope this little admonition may be of service to them, and put them on changing a habit, which, though in the exercise it is chiefly an act of imagination, yet has serious consequences in life, as it brings on real griefs and misfortunes. For, as many are offended by, and nobody loves, this sort of people, no one shows them more than the most

common civility and respect, and scarcely that ; and this frequently puts them out of humour, and draws them into disputes and contentions. If they aim at obtaining some advantage in rank or fortune, nobody wishes them success, or will stir a step, or speak a word, to favour their pretensions. If they incur public censure or disgrace, no one will defend or excuse, and many join to aggravate their misconduct, and render them completely odious. If these people will not change this bad habit, and condescend to be pleased with what is pleasiug, without fretting themselves and others about the contraries, it is good for others to avoid an acquaintance with them, which is always disagreeable, and sometimes very inconvenient, especially when one finds oneself entangled in their quarrels.

An old philosophical friend of mine was grown from experience, very cautious in this particular, and carefully avoided any intimacy with such people. He had, like other philosophers, a thermometer to show him the heat of the weather, and a barometer, to mark when it was likely to prove good or bad ; but there being no instrument invented to discover, at first sight, this unpleasing disposition in a person, he, for that purpose, made use of his legs, one of which was remarkably handsome, the other by some accident, crooked and deformed. If a stranger, at the first interview, regarded his ugly leg more than his handsome one, he doubted him. If he spoke of it, and took no notice of the handsome leg, that was sufficient to determine my philosopher

to have no further acquaintance with him. Every body has not this two-legged instrument ; but every one, with a little attention, may observe signs of that carping, fault-finding disposition, and take the same resolution of avoiding the acquaintance of those infected with it. I therefore advise those critical, querulous, discontented, unhappy people, that, if they wish to be respected and beloved by others, and happy in themselves, they should *leave off looking at the ugly leg.*

MORALS OF CHESS.

PLAYING at chess is the most ancient and most universal game known among men ; for its original is beyond the memory of history, and it has, for numberless ages, been the amusement of all the civilized nations of Asia, the Persians, the Indians, and the Chinese. Europe has had it above a thousand years ; the Spaniards have spread it over their part of America, and it begins lately to make its appearance in these states. It is so interesting in itself, as not to need the view of gain to induce engaging in it ; and thence it is never played for money. Those, therefore, who have leisure for such diversions, cannot find one that is more innocent ; and the following piece, written with a view to correct (among a few young friends) some little improprieties in the practice of it, shows, at the same time, that it may, in its effects on the mind, be not merely innocent, but advantageous, to the vanquished as well as the victor.

The game of chess is not merely an idle amusement. Several very valuable qualities of the mind, useful in the course of human life, are to be acquired or strengthened by it, so as to become habits, ready on all occasions. For life is a kind of chess, in which we have often points to gain, and competitors, or adversaries to contend with, and in which there is a vast variety of good and ill events, that are, in some degree the effects of prudence, or the want of it. By playing at chess, then, we may learn,

I. *Foresight*, which looks a little into futurity, and considers the consequences that may attend an action: for it is continually occurring to the player, "If I move this piece, what will be the advantage of my new situation? What use can my adversary make of it to annoy me? What other moves can I make to support it, and to defend myself from his attacks?"

II. *Circumspection*, which surveys the whole chess-board, or scene of action, the relations of the several pieces and situations, the dangers they are respectively exposed to, the several possibilities of their aiding each other, the probabilities that the adversary may take this or that move, and attack this or the other piece, and what different means can be used to avoid his stroke, or turn its consequences against him.

III. *Caution*, not to make our moves too hastily. This habit is best acquired by observing strictly the laws of the game, such as, "If you touch a piece, you must move it somewhere: if you set it down

You must let it stand:" and it is therefore best that these rules should be observed, as the game thereby becomes more the image of human life, and particularly of war; in which, if you have incautiously put yourself into a bad and dangerous position, you cannot obtain your enemy's leave to withdraw your troops, and place them more securely, but you must abide all the consequences of your rashness.

And, lastly, we learn by chess the habit of *not being discouraged by present bad appearances in the state of our affairs*, the habit of *hoping for a favourable change*, and that of *persevering in the search of resources*. The game is so full of events, there is such a variety of turns in it, the fortune of it is so subject to sudden vicissitudes, and one so frequently, after long contemplation, discovers the means of extricating oneself from a supposed insurmountable difficulty, that one is encouraged to continue the contest to the last, in hopes of victory by our own skill, or at least of getting a stale mate, by the negligence of our adversary. And whoever considers, what in chess he often sees instances of, that particular pieces of success are apt to produce presumption, and its consequent inattention, by which the loss may be recovered. will learn not to be too much discouraged by the present success of his adversary, nor to despair of final good fortune upon every little check he receives in the pursuit of it.

That we may, therefore, be induced more frequently to choose this beneficial amusement, in preference to others, which are not attended with the same ad-

vantages, every circumstance which may increase the pleasures of it should be regarded ; and every action or word that is unfair, disrespectful, or that in any way may give uneasiness, should be avoided, as contrary to the immediate intention of both the players, which is to pass the time agreeably.

Therefore, first, if it is agreed, to play according to the strict rules ; then those rules are to be exactly observed by both parties, and should not be insisted on for one side, while deviated from by the other—for this is not equitable.

Secondly, if it is agreed, not to observe the rules exactly, but one party demands indulgences, he should then be as willing to allow them to the other.

Thirdly, no false move should ever be made to extricate yourself out of difficulty, or to gain an advantage. There can be no pleasure in playing with a person once detected in such unfair practice.

Fourthly, if your adversary is long in playing, you ought not to hurry him, or express any uneasiness at his delay. You should not sing, nor whistle, nor look at your watch, nor take up a book to read, nor make a tapping with your feet on the floor, or with your fingers on the table, nor do any thing that may disturb his attention. For all these things displease ; and they do not show your skill in playing, but your craftiness or your rudeness.

Fifthly, you ought not to endeavour to amuse and deceive your adversary, by pretending to have made bad moves, and saying, that you have now lost the game, in order to make him secure and careless, and

nattentive to your schemes ; for this is fraud and deceit, not skill in the game.

Sixthly, you must not, when you have gained a victory, use any triumphing or insulting expression, nor show too much pleasure ; but endeavour to console your adversary, and make him less dissatisfied with himself, by every kind of civil expression that may be used with truth, such as, "you understand the game better than I, but you are a little inattentive ;" or, "you play too fast ;" or, "you had the best of the game, but something happened to divert your thoughts, and that turned it in my favour."

Seventhly, if you are a spectator while others play, observe the most perfect silence. For if you give advice, you offend both parties, him against whom you give it, because it may cause the loss of his game ; him in whose favour you give it, because, though it be good, and he follows it, he loses the pleasure he might have had, if you had permitted him to think until it had occurred to himself. Even after a move or moves, you must not, by replacing the pieces, show how it might have been placed better ; for that displeases, and may occasion disputes and doubts about their true situation. All talking to the players lessens or diverts their attention, and is therefore unpleasing. Nor should you give the least hint to either party, by any kind of noise or motion. If you do, you are unworthy to be a spectator. If you have a mind to exercise or show your judgment, do it in playing your own game, when you have an

opportunity, not in criticizing, or meddling with, or counselling the play of others.

Lastly, if the game is not to be played rigorously, according to the rules above mentioned, then moderate your desire of victory ~~lover~~ your adversary, and be pleased with one over yourself. Snatch not eagerly at every advantage offered by his unskilfulness or inattention; but point out to him kindly, that by such a move he places or leaves a piece in danger, and unsupported; that by another he will put his king in a perilous situation, &c. By this generous civility (so opposite to the unfairness above forbidden) you may, indeed, happen to lose the game to your opponent, but you will win, what is better, his esteem, his respect, and his affection, together with the silent approbation and good-will of impartial spectators.

THE ART OF PROCURING PLEASANT DREAMS.

INSCRIBED TO MISS * * * *.

Being written at her request.

As a great part of our life is spent in sleep, during which we have sometimes pleasing, and sometimes painful dreams, it becomes of some consequence to obtain the one kind, and avoid the other; for, whether real or imaginary, pain is pain, and pleasure is pleasure. If we can sleep without dreaming, it is

well that painful dreams are avoided. If, while we sleep, we can have any pleasing dreams, it is, as the French say, *tant gagné*, so much added to the pleasure of life.

To this end, it is, in the first place, necessary, to be careful in preserving health, by due exercise, and great temperance ; for, in sickness, the imagination is disturbed, and disagreeable, sometimes terrible, ideas are apt to present themselves. Exercise should precede meals, not immediately follow them : the first promotes, the latter, unless moderate, obstructs digestion. If, after exercise, we feed sparingly, the digestion will be easy and good, the body lightsome, the temper cheerful, and all the animal functions performed agreeably. Sleep, when it follows, will be natural and undisturbed : while indolence, with full feeding, occasions nightmares and horrors inexpressible : we fall from precipices, are assaulted by wild beasts, murderers, and dæmons, and experience every variety of distress. Observe, however, that the quantities of food and exercise are relative things : those who move much may, and indeed ought, to eat more ; those who use little exercise should eat little. In general, mankind, since the improvement of cookery, eat about twice as much as nature requires. Suppers are not bad, if we have not dined ; but restless nights naturally follow hearty suppers, after full dinners. Indeed, as there is a difference in constitutions, some rest well after these meals ; it costs them only a frightful dream, and an apoplexy, after which they sleep till doomsday. No-

thing is more common in the newspapers, than instances of people, who, after eating a hearty supper, are found dead a-bed in the morning.

Another means of preserving health, to be attended to, is the having a constant supply of fresh air in your bed-chamber. It has been a great mistake, the sleeping in rooms exactly closed, and in beds surrounded by curtains. No outward air that may come into you is so unwholesome as the unchanged air, often breathed, of a close chamber. As boiling water does not grow hotter by longer boiling, if the particles that receive greater heat can escape; so living bodies do not putrefy, if the particles, as fast as they become putrid, can be thrown off. Nature expels them by the pores of the skin and the lungs, and in a free open air they are carried off; but, in a close room, we receive them again and again, though they become more and more corrupt. A number of persons crowded into a small room thus spoil the air in a few minutes, and even render it mortal, as in the Black Hole at Calcutta. A single person is said to spoil only a gallon of air per minute, and therefore requires a longer time to spoil a chamber full; but it is done, however, in proportion, and many putrid disorders hence have their origin. It is recorded of Methusalem, who, being the longest liver, may be supposed to have best preserved his health, that he slept always in the open air; for, when he had lived five hundred years, an angel said to him, "Arise, Methusalem, and build thee an house, for thou shalt yet live five hundred years longer." But

Methusalem answered and said, " If I am to live but five hundred years longer, it is not worth while to build me an house ; I will sleep in the air, as I have been used to do." Physicians, after having for ages contended that the sick should not be indulged with fresh air, have at length discovered that it may do them good. It is therefore to be hoped, that they may in time discover likewise, that it is not hurtful to those who are in health, and that we may be then cured of the *ærophobia*, that at present distresses weak minds, and make them choose to be stifled and poisoned, rather than leave open the window of a bed-chamber, or put down the glass of a coach.

Confined air when saturated with perspirable matter,* will not receive more ; and that matter must remain in our bodies and occasion diseases : but it gives some previous notice of its being about to be hurtful, by producing certain uneasiness, slight indeed at first, such as, with regard to the lungs, is a trifling sensation, and to the pores of the skin a kind of restlessness, which is difficult to describe, and few that feel it know the cause of it. But we may recollect, that sometimes, on waking in the night, we have, if warmly covered, found it difficult to get asleep again. We turn often without finding repose in any position. This fidgettiness, to use a vulgar expression for want of a better, is occasioned

* What physicians call the perspirable matter, is that vapour which passes off from our bodies, from the lungs, and through the pores of the skin. The quantity of this is said to be five-eighths of what we eat.

wholly by an uneasiness in the skin, owing to the retention of the perspirable matter—the bed-clothes having received their quantity, and, being saturated, refusing to take any more. To become sensible of this by an experiment, let a person keep his position in the bed, but throw off the bed-clothes, and suffer fresh air to approach the part uncovered of his body; he will then feel that part suddenly refreshed; for the air will immediately relieve the skin, by receiving, licking up, and carrying off, the load of perspirable matter that incommoded it. For every portion of cool air, that approaches the warm skin, in receiving its part of that vapour, receives therewith a degree of heat, that rarifies and renders it lighter, when it will be pushed away, with its burden, by cooler and therefore heavier fresh air; which, for a moment supplies its place, and then, being likewise changed and warmed, gives way to a succeeding quantity. This is the order of nature, to prevent animals being infected by their own perspiration. He will now be sensible of the difference between the part exposed to the air, and that which, remaining sunk in the bed, denies the air access: for this part now manifests its uneasiness more distinctly by the comparison, and the seat of the uneasiness is more plainly perceived than when the whole surface of the body was affected by it.

Here, then, is one great and general cause of unpleasant dreams; for when the body is uneasy, the mind will be disturbed by it, and disagreeable ideas of various kinds will, in sleep, be the natural conse-

quences. The remedies, preventative and curative, follow :

1. By eating moderately (as before advised for health's sake) less perspirable matter is produced in a given time ; hence the bed-clothes receive it longer before they are saturated ; and we may, therefore, sleep longer, before we are made uneasy by their refusing to receive any more.

2. By using thinner and more porous bed-clothes, which will suffer the perspirable matter more easily to pass through them, we are less incommoded, such being longer tolerable.

3. When you are awakened by this uneasiness, and find you cannot easily sleep again, get out of bed, beat up and turn your pillow, shake the bed-clothes well, with at least twenty shakes, then throw the bed open, and leave it to cool ; in the meanwhile, continuing undressed, walk about your chamber, till your skin has had time to discharge its load, which it will do sooner as the air may be drier and colder. When you begin to feel the cold air unpleasant, then return to your bed, and you will soon fall asleep, and your sleep will be sweet and pleasant. All the scenes presented to your fancy will be of the pleasing kind. I am often as agreeably entertained with them, as by the scenery of an opera. If you happen to be too indolent to get out of bed, you may, instead of it, lift up your bed-clothes with one arm and leg, so as to draw in a good deal of fresh air, and, by letting them fall, force it out again. This, repeated twenty times, will so clear them of the perspirable matter they

have imbibed, as to permit your sleeping well for some time afterwards. But this latter method is not equal to the former.

Those who do not love trouble, and can afford to have two beds, will find great luxury in rising, when they wake in a hot bed, and going into the cool one. Such shifting of beds would also be of great service to persons ill of fever, as it refreshes and frequently procures sleep. A very large bed, that will admit a removal so distant from the first situation as to be cool and sweet, may in a degree answer the same end.

One or two observations more will conclude this little piece. Care must be taken, when you lie down, to dispose your pillow so as to suit your manner of placing your head, and to be perfectly easy; then place your limbs so as not to bear inconveniently hard upon one another, as for instance, the joints of your ancles: for though a bad position may at first give but little pain and be hardly noticed, yet a continuance will render it less tolerable, and the uneasiness may come on while you are asleep, and disturb your imagination.

These are the rules of the art. But though they will generally prove effectual in producing the end intended, there is a case in which the most punctual observance of them will be totally fruitless. I need not mention the case to you, my dear friend, but my account of the art would be imperfect without it. The case is, when the person, who desires to have pleasant dreams, has not taken care to preserve, what is necessary above all things.

A GOOD CONSCIENCE.

**PRECAUTIONS TO BE USED BY THOSE WHO ARE
ABOUT TO UNDERTAKE A SEA VOYAGE.**

WHEN you intend a long voyage, you may do well to keep your intention as much as possible a secret, or at least the time of your departure ; otherwise you will be continually interrupted in your preparations by the visits of friends and acquaintance, who will not only rob you of the time you want, but put things out of your mind ; so that when you come to sea, you have the mortification to recollect points of business that ought to have been done, accounts you intended to settle, and conveniences, you had proposed to bring with you, &c. &c. all which have been omitted through the effect of these officious friendly visits. Would it not be well if this custom could be changed ; if the voyager, after having, without interruption, made all his preparations, should use some of the time he has left in going himself to take leave of his friends at their own houses, and let them come to congratulate him on his happy return.

It is not always in your power to make a choice in your captain, though much of your comfort in the passage may depend on his personal character, as you must for so long a time be confined to his company, and under his direction ; if he be a sensible, sociable, good-natured, obliging man, you will be so much the happier. Such there are ; but if he happens to be otherwise, and is only skilful, careful, watchful, and active in the conduct of his ship, excuse the rest, for these are the essentials.

Whatever right you may have by agreement in the mass of stores laid in by him for the passengers, it is good to have some particular things in your own possession, so as to be always at your own command.

1. Good water, that of the ship being often bad. You can be sure of having it good only by bottling it from a clear spring or well, and in clean bottles. 2. Good tea. 3. Coffee ground. 4. Chocolate. 5. Wine of the sort you particularly like, and cider. 6. Raisins. 7. Almonds. 8. Sugar. 9. Capillaire. 10. Lemons. 11. Jamaica spirits. 12. Eggs greased. 13. Diet bread. 14. Portable soup. 15. Rusks. As to fowls, it is not worth while to have any called yours, unless you could have the feeding and managing of them according to your own judgment under your own eye. As they are generally treated at present in ships, they are for the most part sick, and their flesh tough and hard as whitleather.

All seamen have an opinion, broached I supposed at first prudently, for saving of water when short, that fowls do not know when they have drank enough, and will kill themselves if you give them too much, so they are served with a little only once in two days. This is poured into troughs that lie sloping, and therefore immediately runs down to the lower end. There the fowls ride upon one another's backs to get at it, and some are not happy enough to reach and once dip their bills in it. Thus tantalized, and tormented with thirst, they cannot digest their dry food; they fret, pine, sicken, and die. Some are found dead, and thrown overboard every morning, and

those killed for the table are not eatable. Their troughs should be in little divisions, like cups, to hold the water separately. But this is never done. The sheep and hogs are therefore your best dependence for fresh meat at sea, the mutton being generally tolerable, and the pork excellent.

It is possible your captain may have provided so well in the general stores, as to render some of the particulars above recommended of little or no use to you. But there are frequently in the ship poorer passengers, who are taken at a lower price, lodge in the steerage, and have no claim to any of the cabin provisions, or to any but those kinds that are allowed the sailors. These people are sometimes dejected, sometimes sick ; there may be women and children among them. In a situation where there is no going to market, to purchase such necessaries, a few of these your superfluities distributed occasionally may be of great service, restore health, save life, make the miserable happy, and thereby afford you infinite pleasure.

The worst thing in ordinary merchant ships is the cookery. They have no professed cook ; and the worst hand as a seaman is appointed to that office, in which he is not only very ignorant, but very dirty. The sailors have therefore a saying, that *God sends meat, and the devil cooks*. Passengers more piously disposed, and willing to believe Heaven orders all things for the best, may suppose, that, knowing the sea-air and constant exercise by the motion of the vessel would give us extraordinary appetites, bad

cooks were kindly sent to prevent our eating too much ; or that, foreseeing we should have bad cooks, good appetites were furnished to prevent our starving. If you cannot trust to these circumstances, a spirit-lamp, with a blaze-pan, may enable you to cook some little things for yourself ; such as a hash, a soup, &c. And it might be well also to have among your stores some potted meats, which if well put up will keep long good. A small tin oven, to place with the open side before the fire, may be another good utensil, in which your own servant may roast for you a bit of pork or mutton. You will sometimes be induced to eat of the ship's salt beef, as it is often good. You will find cider the best quencher of that thirst which salt meat or fish occasions. The ship biscuit is too hard for some sets of teeth. It may be softened by toasting. But rusk is better ; for being made of good fermented bread, sliced and baked a second time, the pieces imbibe the water easily, soften immediately, digest more kindly, and are therefore more wholesome than the unfermented biscuit. By the way, rusk is the true original biscuit, so prepared to keep for sea, biscuit in French signifying twice baked. If your dry peas boil hard, a two-pound iron shot put with them into the pot, will, by the motion of the ship, grind them as fine as mustard.

The accidents I have seen at sea with large dishes of soup upon a table, from the motion of the ship, have made me wish, that our potters or pewterers would make soup-dishes in divisions, like a set of small bowls united together, each containing about

sufficient for one person only; for then when the ship should make a sudden heel, the soup would not in a body flow over one side, and fall into people's laps, and scald them, as is sometimes the case, but would be retained in the separate divisions.

After these trifles, permit the addition of a few general reflections. Navigation, when employed in supplying necessary provisions to a country in want, and thereby preventing famines, which were more frequent and destructive before the invention of that art, is undoubtedly a blessing to mankind. When employed merely in transporting superfluities, it is a question whether the advantage of the employment it affords is equal to the mischief of hazarding so many lives on the ocean. But when employed in pillaging merchants and transporting slaves, it is clearly the means of augmenting the mass of human misery. It is amazing to think of the ships and lives risked in fetching tea from China, coffee from Arabia, sugar and tobacco from America, all which our ancestors did well without. Sugar employs near one thousand ships, tobacco almost as many. For the utility of tobacco there is little to be said; and for that of sugar, how much more commendable would it be if we could give up the few minutes' gratification afforded once or twice a day by the taste of sugar in our tea, rather than encourage the cruelties exercised in producing it. An eminent French moralist says, that when he considers the wars we excite in Africa to obtain slaves, the numbers necessarily slain in those wars, the many prisoners who

perish at sea by sickness, bad provisions, foul air, &c. &c. in the transportation, and how many afterwards die from the hardships of slavery, he cannot look on a piece of sugar without conceiving it stained with spots of human blood ! had he added the consideration of the wars we make to take and retake the sugar islands from one another, and the fleets and armies that perish in those expeditions, he might have seen his sugar not merely spotted, but thoroughly dyed scarlet in grain. It is these wars that make the maritime powers of Europe, the inhabitants of London and Paris, pay dearer for sugar than those of Vienna, a thousand miles from the sea ; because their sugar costs not only the price they pay for it by the pound, but all they pay in taxes to maintain the fleets and armies that fight for it.

DIALOGUE BETWEEN FRANKLIN AND THE GOUT

Midnight, October 22, 1780.

Franklin. EH ! oh ! eh ! What have I done to merit these cruel sufferings ?

Gout. Many things ; you have ate and drank too freely, and too much indulged those legs of yours in their indolence.

Franklin. Who is it that accuses me ?

Gout. It is I, even I, the Gout.

Franklin. What ! my enemy in person ?

Gout. No—not your enemy.

Franklin. I repeat it ; my enemy : for you would not only torment my body to death, but ruin my good name : you reproach me as a glutton and a tippler : now, all the world that knows me will allow that I am neither the one nor the other.

Gout. The world may think as it pleases : it is always very complaisant to itself, and sometimes to its friends ; but I very well know, that the quantity of meat and drink proper for a man who takes a reasonable degree of exercise, would be too much for another who never takes any.

Franklin. I take—Eh ! Oh !—as much exercise—Eh !—as I can, Madam Gout. You know my sedentary state, and on that account, it would seem, Madam Gout, as if you might spare me a little, seeing it is not altogether my own fault.

Gout. Not a jot : your rhetoric and your politeness are thrown away ; your apology avails nothing. If your situation in life is a sedentary one, your amusements, your recreations, at least, should be active. You ought to walk or ride ; or, if the weather prevents that play at billiards. But let us examine your course of life. While the mornings are long, and you have leisure to go abroad, what do you do ? Why, instead of gaining an appetite for breakfast, by salutary exercise, you amuse yourself with books, pamphlets, or newspapers, which commonly are not worth the reading. Yet you eat an inordinate breakfast—four dishes of tea, with cream, and one or two buttered toasts, with slices of hung beef, which I fancy are not things the most easily digested. Imme-

diately afterward you sit down to write at your desk, or converse with persons who apply to you on business. Thus the time passes till one, without any kind of bodily exercise. But all this I could pardon, in regard, as you say, to your sedentary condition. But what is your practice after dinner? Walking in the beautiful gardens of those friends with whom you have dined, would be the choice of men of sense : yours is to be fixed down to chess, where you are found engaged for two or three hours ! This is your perpetual recreation, which is the least eligible of any for a sedentary man, because, instead of accelerating the motion of the fluids, the rigid attention it requires helps to retard the circulation and obstruct internal secretions. Wrapped in the speculations of this wretched game, you destroy your constitution. What can be expected from such a course of living but a body replete with stagnant humours, ready to fall a prey to all kinds of dangerous maladies, if I, the Gout, did not occasionally bring you relief by agitating these humours, and so purifying or dissipating them? If it was in some nook or alley in Paris, deprived of walks, that you played awhile at chess after dinner, this might be excusable, but the same taste prevails with you in Passy, Auteuil, Montmartre, or Sanoy, places where there are the finest gardens and walks, a pure air, beautiful women, and most agreeable and instructive conversation ; all which you might enjoy by frequenting the walks ! But these are rejected for this abominable game of chess. Fie, then, Mr. Franklin ! But amidst my instructions, I had almost forgot to ad-

minister my wholesome corrections : so take that twinge—and that.

Franklin. Oh ! Eh ! Oh !—Oh-h-h ! As much instruction as you please, Madam Gout, and as many reproaches—but pray, madam, a truce with your corrections !

Gout. No, sir, no—I will not abate a particle of what is so much for your good—therefore—

Franklin. Oh ! Eh-h-h !—It is not fair to say I take no exercise, when I do very often, going out to dine, and returning in my carriage.

Gout. That, of all imaginable exercise, is the most slight and insignificant, if you allude to the motion of a carriage suspended on springs. By observing the degree of heat obtained by different kinds of motion, we may form an estimate of the quantity of exercise given by each. Thus, for example, if you turn out to walk in winter with cold feet, in an hour's time you will be in a glow all over ; ride on horseback, the same effect will scarcely be perceived by four hours' round trotting : but if you loll in a carriage, such as you have mentioned, you may travel all day, and gladly enter the last inn to warm your feet by a fire. Flatter yourself then no longer, that half an hour's airing in your carriage deserves the name of exercise. Providence has appointed few to roll in carriages, while he has given to all a pair of legs, which are machines infinitely more commodious and serviceable. Be grateful, then, and make a proper use of yours. Would you

know how they forward the circulation of your fluids, in the very action of transporting you from place to place? Observe, when you walk, that all your weight is alternately thrown from one leg to the other; this occasions a great pressure on the vessels of the foot, and repels their contents. When relieved, by the weight being thrown on the other foot, the vessels of the first are allowed to replenish, and by a return of this weight, this repulsion again succeeds; thus accelerating the circulation of the blood. The heat produced in any given time depends on the degree of this acceleration: the fluids are shaken, the humours attenuated, the secretions facilitated, and all goes well; the cheeks are ruddy, and health is established. Behold your fair friend at Auteuil: a lady who received from bounteous nature more really useful science than half a dozen such pretenders to philosophy as you have been able to extract from all your books. When she honours you with a visit, it is on foot. She walks all hours of the day, and leaves indolence and its concomitant maladies to be endured by her horses. In this see at once the preservative of her health and personal charms. But you, when you go to Auteuil, must have your carriage, though it is no farther from Passy to Auteuil, than from Auteuil to Passy.

Franklin. Your reasonings grow very tiresome.

Gout. I stand corrected. I will be silent, and continue my office: take that—and that.

Franklin. Oh! Oh-h! Talk on, I pray you!

Gout. No, no ; I have a good number of twinges for you to-night, and you may be sure of some more to-morrow.

Franklin. What, with such a fever ! I shall go distracted. Oh ! Eh ! Can no one bear it for me ?

Gout. Ask that of your horses ; they have served you faithfully.

Franklin. How can you so cruelly sport with my torments ?

Gout. Sport ? I am very serious. I have here a list of your offences against your own health distinctly written, and can justify every stroke inflicted on you.

Franklin. Read it then.

Gout. It is too long a detail ; but I will briefly mention some particulars.

Franklin. Proceed—I am all attention.

Gout. Do you remember how often you have promised yourself, the following morning, a walk in the grove of Boulogne, in the garden de la Muette, or in your own garden, and have violated your promise, alleging, at one time it was too cold, at another too warm, too windy, too moist, or what else you pleased ; when in truth it was too nothing, but your insuperable love of ease ?

Franklin. That I confess may have happened occasionally, probably ten times in a year.

Gout. Your confession is very far short of the truth ; the gross amount is one hundred and ninety-nine times.

Franklin. Is it possible ?

Gout. So possible that it is fact ; you may rely on the accuracy of my statement. You know Mr. B.'s gardens, and what fine walks they contain ; you know the handsome flight of an hundred steps, which lead from the terrace above to the lawn below. You have been in the practice of visiting this amiable family twice a week after dinner ; and as it is a maxim of your own, that " a man may take as much exercise in walking a mile up and down stairs, as in ten on level ground," what an opportunity was here for you to have had exercise in both these ways ! Did you embrace it—and how often ?

Franklin. I cannot immediately answer that question.

Gout. I will do it for you : not once.

Franklin. Not once ?

Gout. Even so. During the summer you went there at six o'clock. You found the charming lady, with her lovely children and friends, eager to walk with you, and entertain you with their agreeable conversation : and what has been your choice ? Why to sit on the terrace, satisfying yourself with the fine prospect, and passing your eye over the beauties of the garden below, without taking one step to descend and walk about in them. On the contrary, you call for tea, and the chess-board ; and lo ! you are occupied in your seat till nine o'clock, and that beside two hours' play after dinner ; and then, instead of walking home, which would have bestirred you a little, you step into your carriage. How absurd to suppose, that all this carelessness can be reconcileable with health, without my interposition !

Franklin. I am convinced now of the justness of poor Richard's remark, that "Our debts and our sins are always greater than we think for."

Gout. So it is! you philosophers are sages in your maxims, and fools in your conduct.

Franklin. But do you charge among my crimes, that I return in a carriage from Mr. B.'s?

Gout. Certainly : for having been seated all the while, you cannot object the fatigue of the day, and cannot want therefore the relief of a carriage.

Franklin. What then would you have me do with my carriage?

Gout. Burn it if you choose ; you would at least get heat out of it once in this way ; or if you dislike that proposal, here's another for you : observe the poor peasants who work in the vineyards and grounds about the villages of Passy, Auteuil, Chaillais, &c. you may find every day, among these deserving creatures, four or five old men and women, bent, and perhaps crippled, by weight of years, and too long and too great labour. After a most fatiguing day these people have to trudge a mile or two to their smoky huts. Order your coachman to set them down. That is an act that will be good for your soul ; and at the same time, after your visit to the B**s if you return on foot, that will be good for your body?

Franklin. Ah ! how tiresome you are !

Gout. Well then, to my office ; it should not be forgotten that I am your physician. There.

Franklin. Oh-h-h! what a devil of a physician!

Gout. How ungrateful are you to say so! Is it not I, who, in the character of your physician, have saved you from the palsy, dropsy, and apoplexy? one or other of which would have done for you long ago, but for me.

Franklin. I submit—and thank you for the past; but entreat the discontinuance of your visits for the future: for in my mind one had better die than be cured so dolefully. Permit me just to hint, that I have also not been unfriendly to you. I never feed physician, or quack of any kind, to enter the list against you; if then you do not leave me to my repose, it may be said you are ungrateful too.

Gout. I can scarcely acknowledge that as any objection. As to quacks, I despise them: they may kill you, indeed, but cannot injure me. And as to regular physicians, they are at last convinced, that the gout, in such a subject as you are, is no disease, but a remedy; and wherefore cure a remedy? But to our business—there—

Franklin. Oh! Oh! For Heaven's sake leave me; and I promise faithfully never more to play at chess, but to take exercise daily, and live temperately.

Gout. I know you too well. You promise fair; but, after a few months of good health, you will return to your old habits; your fine promises will be forgotten like the forms of the last year's clouds. Let us then finish the account, and I will go. But

I leave you with an assurance of visiting you again at a proper time and place ; for my object is your good, and you are sensible now that I am your real friend.

A PARABLE AGAINST PERSECUTION, IN IMITATION
OF SCRIPTURE LANGUAGE.

1. AND it came to pass, after these things, that Abraham sat in the door of his tent, about the going down of the sun.

2. And behold a man bent with age, coming from the way of the wilderness leaning on a staff.

3. And Abraham arose, and met him, and said unto him, Turn in, I pray thee, and wash thy feet, and tarry all night ; and thou shalt arise early in the morning, and go on thy way.

4. And the man said, Nay ; for I will abide under this tree.

5. But Abraham pressed him greatly : so he turned and they went into the tent : and Abraham baked unleavened bread, and they did eat.

6. And when Abraham saw that the man blessed not God, he said unto him, Wherefore dost thou not worship the most high God, creator of heaven and earth ?

7. And the man answered and said, I do not worship thy God, neither do I call upon his name, for I have made to myself a God, which abideth always in my house, and provideth me with all things.

8. And Abraham's zeal was kindled against the man, and he arose, and fell upon him, and drove him forth with blows into the wilderness.

9. And God called unto Abraham, saying, Abraham, where is the stranger?

10. And Abraham answered and said, Lord, he would not worship thee, neither would he call upon thy name, therefore have I driven him out from before my face into the wilderness.

11. And God said, Have I borne with him these hundred and ninety and eight years, and nourished him, and clothed him, notwithstanding his rebellion against me, and couldst not thou, who art thyself a sinner, bear with him one night?

12. And Abraham said, Let not the anger of my Lord wax hot against his servant; lo, I have sinned; forgive me, I pray thee.

13. And Abraham arose, and went forth into the wilderness, and diligently sought for the man, and found him, and returned with him to the tent, and when he had entreated him kindly, he sent him away on the morrow with gifts.

14. And God spake again unto Abraham, saying, For this thy sin shall thy seed be afflicted four hundred years in a strange land.

15. But for thy repentance will I deliver them, and they shall come forth with power, and with gladness of heart, and with much substance.

ON THE DEATH OF RELATIVES.

To Miss Hubbard.

[Philadelphia, Feb. 22, 1756.]

I CONDOLE with you. We have lost a most dear and valuable relation.* But it is the will of God and nature that these mortal bodies be laid aside when the soul is to enter into real life. This is rather an embryo state, a preparation for living. A man is not completely born until he be dead. Why then should we grieve that a new child is born among the immortals, a new member added to their happy society? We are spirits. That bodies should be lent us, while they can afford us pleasure, assist us in acquiring knowledge, or doing good to our fellow-creatures, is a kind and benevolent act of God. When they become unfit for these purposes, and afford us pain instead of pleasure, instead of an aid become an encumbrance, and answer none of the intentions for which they were given, it is equally kind and benevolent that a way is provided by which we may get rid of them. Death is that way. We ourselves, in some cases, prudently choose a partial death. A mangled, painful limb, which cannot be restored, we willingly cut off. He who plucks out a tooth parts with it freely, since the pain goes with it; and he who quits the whole body parts at once with all pains, and possibilities of pains

* Mr. John Franklin, the writer's brother.

and diseases, it was liable to, or capable of making him suffer.

Our friend and we were invited abroad on a party of pleasure, which is to last for ever. His chair was ready first, and he is gone before us. We could not all conveniently start together: and why should you and I be grieved at this, since we are soon to follow, and know where to find him?

Adieu.

B. FRANKLIN.

THE EPHEMERA AN EMBLEM OF HUMAN LIFE.

To Madame Brillon.

You may remember, my dear friend, that when we lately spent that happy day in the delightful garden and sweet society of the Moulin Jolly, I stopped a little in one of our walks, and stayed some time behind the company. We had been shown numberless skeletons of a kind of little fly, called an ephemera, whose successive generations, we were told, were bred and expired within the day. I happened to see a living company of them on a leaf, who appeared to be engaged in conversation. You know I understand all the inferior animal tongues: my too great application to the study of them is the best excuse I can give for the little progress I have made in your charming language. I listened, through curiosity to the discourse of these little creatures; but as they, in their national vivacity, spoke three

or four together, I could make but little of their conversation. I found, however, by some broken expressions that I heard now and then, they were disputing warmly on the merit of two foreign musicians, one a *cousin*, the other a *muschetto*; in which dispute they spent their time, seemingly as regardless of the shortness of life as if they had been sure of living a month. Happy people! thought I, you live certainly under a wise, just, and mild government, since you have no public grievances to complain of, nor any subject of contention, but the perfections or imperfections of foreign music. I turned my head from them to an old gray-headed one, who was single on another leaf, and talking to himself. Being amused with his soliloquy, I put it down in writing, in hopes it will likewise amuse her to whom I am so much indebted for the most pleasing of all amusements, her delicious company and heavenly harmony.

"It was," says he, "the opinion of learned philosophers of our race, who lived and flourished long before my time, that this vast world, the Moulin Joly, could not itself subsist more than eighteen hours: and I think there was some foundation for that opinion; since, by the apparent motion of the great luminary that gives life to all nature, and which in my time has evidently declined considerably towards the ocean at the end of our earth, it must then finish its course, be extinguished in the waters that surround us, and leave the world in cold and darkness, necessarily producing universal death

and destruction. I have lived seven of those hours : a great age, being no less than four hundred and twenty minutes of time. How very few of us continue so long ! I have seen generations born, flourish, and expire. My present friends are the children and grand-children of the friends of my youth, who are now, alas, no more ! And I must soon follow them ; for by the course of nature, though still in health, I cannot expect to live above seven or eight minutes longer. What now avails all my toil and labour, in amassing honey-dew on this leaf, which I cannot live to enjoy ! What the political struggles I have been engaged in, for the good of my compatriot inhabitants of this bush, or my philosophical studies, for the benefit of our race in general ! for in politics (what can laws do without morals ?) our present race of ephemera will, in a course of minutes, become corrupt, like those of other and older bushes, and consequently as wretched : and in philosophy how small our progress ! Alas ! art is long, and life is short ! My friends would comfort me with the idea of a name, they say, I shall leave behind me ; and they tell me, I have lived long enough to nature and to glory. But what will fame be to an ephemera, who no longer exists ? and what will become of all history in the eighteenth hour, when the world itself, even the whole *Moulin Joly*, shall come to its end, and be buried in universal ruin ?”

To me, after all my eager pursuits, no solid pleasures now remain, but the reflection of a long life

spent in meaning well, the sensible conversation of a few good lady ephemeræ, and now and then a kind smile and a tune from the ever amiable Brillout.

B. FRANKLIN.

ACCOUNT OF A WHIRLWIND AT MARYLAND.

To Peter Collinson, Esq.

DEAR SIR,

Philadelphia, Aug. 25, 1755.

As you have my former papers on whirlwinds, &c. I now send you an account of one which I had lately an opportunity of seeing and examining myself.

Being in Maryland, riding with colonel Tasker, and some other gentlemen, to his country-seat, where I and my son were entertained by that amiable and worthy man with great hospitality and kindness, we saw, in the vale below us, a small whirlwind beginning in the road, and showing itself by the dust it raised and contained. It appeared in the form of a sugar-loaf, spinning on its point, moving up the hill towards us, and enlarging as it came forward. When it passed by us, its smaller part near the ground appeared no bigger than a common barrel, but widening upwards, it seemed, at forty or fifty feet high, to be twenty or thirty feet in diameter. The rest of the company stood looking after it; but my curiosity being stronger, I followed it, riding close by its side, and observed its licking up, in its progress, all the dust that was under its smaller part. As it is a common opinion that a shot, fired through a water-

spout, will break it, I tried to break this little whirlwind, by striking my whip frequently through it, but without any effect. Soon after, it quitted the road and took into the woods, growing every moment larger and stronger, raising, instead of dust, the old dry leaves with which the ground was thick covered, and making a great noise with them and the branches of the trees, bending some tall trees round in a circle swiftly and very surprisingly, though the progressive motion of the whirl was not so swift but that a man on foot might have kept pace with it, but the circular motion was amazingly rapid. By the leaves it was now filled with, I could plainly perceive that the current of air they were driven by moved upwards in a spiral line ; and when I saw the passing whirl continue entire, after leaving the trunks and bodies of large trees which it had enveloped, I no longer wondered that my whip had no effect on it in its smaller state. I accompanied it about three quarters of a mile, till some limbs of dead trees, broken off by the whirl, flying about, and falling near me, made me more apprehensive of danger : and then I stopped, looking at the top of it as it went on, which was visible, by means, of the leaves contained in it, for a very great height above the trees. Many of the leaves, as they got loose from the upper and widest part, were scattered in the wind ; but so great was their height in the air, that they appeared no bigger than flies. My son who was by this time come up with me, followed the whirlwind till it left the woods, and crossed an old tobacco-field, where, finding neither dust nor leaves

to take up, it gradually became invisible below as it went away over that field. The course of the general wind then blowing was along with us as we travelled, and the progressive motion of the whirlwind was in a direction nearly opposite; though it did not keep a straight line, nor was its progressive motion uniform, it making little sallies on either hand as it went, proceeding sometimes faster, and sometimes slower, and seeming sometimes for a few seconds almost stationary, then starting forwards pretty fast again. When we rejoined the company, they were admiring the vast height of the leaves, now brought by the common wind over our heads. These leaves accompanied us as we travelled, some falling now and then round about us, and some not reaching the ground till we had gone near three miles from the place where we first saw the whirlwind begin. Upon my asking colonel Tasker if such whirlwinds were common in Maryland, he answered pleasantly, "No, not at all common, but we got this on purpose to treat Mr. Franklin." And a very high treat it was to, dear sir, your affectionate friend and humble servant,

B. FRANKLIN.

ON THE SALTNESS OF SEA-WATER.

To Mr. Peter Franklin, in Newport.

London, May 7, 1760.

SIR,

* * * * * It has, indeed, as you observe, been the opinion of some very great naturalists, that the sea is salt only from the dissolution of mineral or rock-

salt, which its waters happened to meet with. But this opinion takes it for granted that all water was originally fresh, of which we can have no proof. I own I am inclined to a different opinion, and rather think all the water on this globe was originally salt, and that the fresh water we find in springs and rivers is the produce of distillation. The sun raises the vapours from the sea, which form clouds, and fall in rain upon the land, and springs and rivers are formed of that rain. As to the rock-salt found in mines, I conceive, that instead of communicating its saltiness to the sea, it is itself drawn from the sea, and that of course the sea is now fresher than it was originally. This is only another effect of nature's distillery, and might be performed various ways.

It is evident, from the quantities of sea-shells, and the bones and teeth of fishes found in high lands, that the sea has formerly covered them. Then, either the sea has been higher than it now is, and has fallen away from those high lands, or they have been lower than they are, and were lifted up out of the water to their present height, by some internal mighty force, such as we still feel some remains of when whole continents are moved by earthquakes. In either case it may be supposed that large hollows, or valleys among hills, might be left filled with sea-water, which evaporating, and the fluid part drying away in a course of years, would leave the salt covering the bottom; and that salt coming afterwards to be covered with earth from the neighbouring hills, could only be found by digging through that earth. Or, as

we know from their effects, that there are deep fiery caverns under the earth, and even under the sea, if at any time the sea leaks into any of them, the fluid parts of the water must evaporate from that heat, and pass off through some volcano, while the salt remains, and by degrees, and continual accretion, becomes a great mass. Thus the cavern may at length be filled, and the volcano connected with it cease burning, as many it is said have done; and future miners, penetrating such cavern, find what we call a salt-mine. This is a fancy I had on visiting the salt-mines at Northwich, with my son. I send you a piece of the rock-salt which he brought up with him out of the mine. * * * *

I am, sir, &c.

B. FRANKLIN.

ON THE EFFECT OF AIR ON THE BAROMETER, AND
THE BENEFITS DERIVED FROM THE STUDY OF
INSECTS.

To Miss Stephenson.

Craven-street, June 11, 1760.

It is a very sensible question you ask, how the air can affect the barometer, when its opening appears covered with wood? If indeed it was so closely covered as to admit of no communication of the outward air to the surface of the mercury, the change of weight in the air could not possibly affect it. But the least crevice is sufficient for the purpose; a pin-hole will do the business. And if you could look behind the frame to which your barometer is fixed, you would certainly find some small opening.

There are indeed some barometers in which the body of mercury at the lower end is contained in a close leather bag, and so the air cannot come into immediate contact with the mercury ; yet the same effect is produced. For the leather being flexible, when the bag is pressed by any additional weight of air, it contracts, and the mercury is forced up into the tube ; when the air becomes lighter, and its pressure less, the weight of the mercury prevails, and it descends again into the bag.

Your observation on what you have lately read concerning insects is very just and solid. Superficial minds are apt to despise those who make that part of the creation their study, as mere triflers ; but certainly the world has been much obliged to them. Under the care and management of man, the labours of the little silkworm afford employment and subsistence to thousands of families, and become an immense article of commerce. The bee, too, yields us its delicious honey, and its wax, useful to a multitude of purposes. Another insect, it is said, produces the cochineal, from whence we have our rich scarlet dye. The usefulness of the cantharides, or Spanish flies, in medicine, is known to all, and thousands give their lives to that knowledge. By human industry and observation, other properties of other insects may possibly be hereafter discovered, and of equal utility. A thorough acquaintance with the nature of these little creatures may also enable mankind to prevent the increase of such as are noxious, or secure

us against the mischiefs they occasion. These things doubtless your books make mention of: I can only add a particular late instance which I had from a Swedish gentleman of good credit. In the green timber, intended for ship-building at the king's yards in that country, a kind of worms was found, which every year became more numerous and more pernicious, so that the ships were greatly damaged before they came into use. The king sent Linnæus the great naturalist, from Stockholm, to inquire into the affair, and see if the mischief was capable of any remedy. He found, on examination, that the worm was produced from a small egg, deposited in the little roughnesses on the surface of the wood, by a particular kind of fly or beetle; from whence the worm, so soon as it was hatched, began to eat into the substance of the wood, and after some time came out again a fly of the parent kind, and so the species increased. The season in which the fly laid its eggs, Linnæus knew to be about a fortnight (I think) in the month of May, and at no other time in the year. He therefore advised, that some days before that season, all the green timber should be thrown into the water, and kept under water till the season was over: which being done by the king's order, the flies, missing their usual nests, could not increase; and the species was either destroyed or went elsewhere; and the wood was effectually preserved; for after the first year, it became too dry and hard for their purpose.

There is, however, a prudent moderation to be used in studies of this kind. The knowledge of nature may be ornamental, and it may be useful ; but if, to attain an eminence in that, we neglect the knowledge and practice of essential duties, we deserve reprehension : for there is no rank in natural knowledge of equal dignity and importance with that of being a good parent, a good child, a good husband, or wife, a good neighbour or friend, a good subject or citizen ; that is, in short, a good Christian. Nicholas Gimcrack, therefore, who neglected the care of his family, to pursue butterflies, was a just object of ridicule, and we must give him up as fair game to the satirist.

Adieu, my dear friend, and believe me ever

Yours affectionately,

B. FRANKLIN.

ON THE ART OF SWIMMING.

To Mr. Oliver Neale.

DEAR SIR,

[No date.]

I CANNOT be of opinion with you that it is too late in life for you to learn to swim. The river near the bottom of your garden affords a most convenient place for the purpose ; and as your new employment requires your being often on the water, of which you have such a dread, I think you would do well to make the trial ; nothing being so likely to remove those apprehensions as the consciousness of an ability to swim to the shore in case of an accident, or of

supporting yourself in the water till a boat could come to take you up.

I do not know how far corks or bladders may be useful in learning to swim, having never seen much trial of them. Possibly they may be of service in supporting the body while you are learning what is called the stroke, or that manner of drawing in and striking out the hands and feet that is necessary to produce progressive motion. But you will be no swimmer till you can place some confidence in the power of the water to support you: I would therefore advise the acquiring that confidence in the first place; especially as I have known several who, by a little of the practice necessary for that purpose, have insensibly acquired the stroke, taught as it were by nature.

The practice I mean is this. Choosing a place where the water deepens gradually, walk coolly into it till it is up to your breast, then turn round, your face to the shore, and throw an egg into the water between you and the shore. It will sink to the bottom, and be easily seen there, as your water is clear. It must lie in water so deep as that you cannot reach it to take it up but by diving for it. To encourage yourself in order to do this, reflect that your progress will be from deeper to shallower water, and that at any time you may, by bringing your legs under you, and standing on the bottom, raise your head far above the water. Then plunge under it with your eyes open, throwing yourself towards the egg, and endeavouring, by the action of your hands and feet

against the water, to get forward till within reach of it. In this attempt you will find, that the water buoys you up against your inclination ; that it is not so easy a thing to sink as you imagined ; that you cannot but by active force get down to the egg. Thus you feel the power of the water to support you, and learn to confide in that power ; while your endeavours to overcome it, and to reach the egg, teach you the manner of acting on the water with your feet and hands, which action is afterwards used in swimming to support your head higher above water, or to go forward through it.

I would the more earnestly press you to the trial of this method, because, though I think I satisfied you that your body is lighter than water, and that you might float in it a long time with your mouth free for breathing, if you would put yourself in a proper posture, and would be still, and forbear struggling ; yet, till you have obtained this experimental confidence in the water, I cannot depend on your having the necessary presence of mind to recollect that posture and the directions I gave you relating to it. The surprise may put all out of your mind. For though we value ourselves on being reasonable knowing creatures, reason and knowledge seem on such occasions to be of little use to us ; and the brutes, to whom we allow scarce a glimmering of either, appear to have the advantage of us.

I will, however, take this opportunity of repeating those particulars to you, which I mentioned in our last conversation, as, by perusing them at your lei-

sure, you may possibly imprint them so in your memory as on occasion to be of some use to you.

1. That though the legs, arms, and head, of a human body, being solid parts, are specifically something heavier than fresh water, yet the trunk, particularly the upper part, from its hollowness, is so much lighter than water, as that the whole of the body taken together is too light to sink wholly under water, but some part will remain above, until the lungs become filled with water, which happens from drawing water into them instead of air, when a person in the fright attempts breathing while the mouth and nostrils are under water.

2. That the legs and arms are specifically lighter than salt water, and will be supported by it, so that a human body would not sink in salt water, though the lungs were filled as above, but from the greater specific gravity of the head.

3. That therefore a person throwing himself on his back in salt water, and extending his arms, may easily lie so as to keep his mouth and nostrils free for breathing ; and by a small motion of his hands may prevent turning, if he should perceive any tendency to it.

4. That in fresh water, if a man throws himself on his back, near the surface, he cannot long continue in that situation but by proper action of his hands on the water. If he uses no such action, the legs and lower part of the body will gradually sink till he comes into an upright, position, in which he will continue suspended, the hollow of the breast keeping the head uppermost.

5. But if, in this erect position, the head is kept upright above the shoulders, as when we stand on the ground, the immersion will, by the weight of that part of the head that is out of water, reach above the mouth and nostrils, perhaps a little above the eyes, so that a man cannot long remain suspended in water with his head in that position.

6. The body continuing suspended as before, and upright, if the head be leaned quite back, so that the face looks upwards, all the back part of the head being then under water, and its weight consequently in a great measure supported by it, the face will remain above water quite free for breathing, will rise an inch higher every inspiration, and sink as much every expiration, but never so low as that the water may come over the mouth.

7. If, therefore, a person unacquainted with swimming, and falling accidentally into the water, could have presence of mind sufficient to avoid struggling and plunging, and to let the body take this natural position, he might continue long safe from drowning till perhaps help would come. For as to the clothes, their additional weight while immersed is very inconsiderable, the water supporting it ; though, when he comes out of the water, he would find them very heavy indeed.

But, as I said before, I would not advise you or any one to depend on having this presence of mind on such an occasion, but learn fairly to swim ; as I wish all men were taught to do in their youth : they would, on many occurrences, be the safer for having

that skill, and on many more the happier, as freer from painful apprehensions of danger, to say nothing of the enjoyment in so delightful and wholesome an exercise. Soldiers particularly should, methinks, all be taught to swim ; it might be of frequent use either in surprising an enemy, or saving themselves : and if I had now boys to educate, I should prefer those schools (other things being equal) where an opportunity was afforded for acquiring so advantageous an art, which once learned is never forgotten.

I am, sir, &c.

B. FRANKLIN.

ON THE SAME SUBJECT.

In Answer to some Inquiries of M. Dubourg.

* * * I AM apprehensive that I shall not be able to find leisure for making all the disquisitions and experiments which would be desirable on this subject. I must, therefore, content myself with a few remarks.

The specific gravity of some human bodies, in comparison to that of water, has been examined by Mr. Robinson, in our Philosophical Transactions, volume 50, page 30, for the year 1757. He asserts, that fat persons with small bones float most easily upon the water.

The diving bell is accurately described in our Transactions.

When I was a boy, I made two oval pallets, each about ten inches long, and six broad, with a hole for the thumb, in order to retain it fast in the palm of my hand. They much resembled a painter's pallets.

In swimming I pushed the edges of these forward, and I struck the water with their flat surfaces as I drew them back. I remember I swam faster by means of these pallets, but they fatigued my wrists. I also fitted to the soles of my feet a kind of sandals; but I was not satisfied with them, because I observed that the stroke is partly given by the inside of the feet and the ancles, and not entirely with the soles of the feet.

We have here waistcoats for swimming, which are made of double sail-cloth, with small pieces of cork quilted in between them.

I know nothing of the *scaphandre* of M. de la Chapelle.

I know by experience, that it is a great comfort to a swimmer, who has a considerable distance to go, to turn himself sometimes on his back, and to vary in other respects the means of procuring a progressive motion.

When he is seized with the cramp in the leg, the method of driving it away is to give to the parts affected a sudden, vigorous, and violent shock; which he may do in the air as he swims on his back.

During the great heats of summer there is no danger in bathing, however warm we may be, in rivers which have been thoroughly warmed by the sun: but to throw one's self into cold spring water, when the body has been heated by exercise in the sun, is an imprudence which may prove fatal. I once knew an instance of four young men, who, having worked at harvest in the heat of the day, with a view of re-

freshing themselves, plunged into a spring of cold water: two died upon the spot, a third the next morning, and the fourth recovered with great difficulty. A copious draught of cold water, in similar circumstances, is frequently attended with the same effect in North America.

The exercise of swimming is one of the most healthy and agreeable in the world. After having swam for an hour or two in the evening, one sleeps coolly the whole night, even during the most ardent heat of summer. Perhaps the pores being cleansed, the insensible perspiration increases and occasions this coolness. It is certain that much swimming is the means of stopping a diarrhœa, and even of producing a constipation. With respect to those who do not know how to swim, or who are affected with a diarrhœa at a season which does not permit them to use that exercise, a warm bath, by cleansing and purifying the skin, is found very salutary, and often effects a radical cure. I speak from my own experience, frequently repeated, and that of others to whom I have recommended this.

You will not be displeased if I conclude these hasty remarks by informing you, that as the ordinary method of swimming is reduced to the act of rowing with the arms and legs, and is consequently a laborious and fatiguing operation when the space of water to be crossed is considerable; there is a method in which a swimmer may pass to great distances with much facility, by means of a sail. This discovery I fortunately made by accident, and in the following manner.

When I was a boy I amused myself one day with flying a paper kite ; and approaching the bank of a pond, which was near a mile broad, I tied the string to a stake, and the kite ascended to a very considerable height above the pond, while I was swimming. In a little time, being desirous of amusing myself with my kite, and enjoying at the same time the pleasure of swimming, I returned, and loosing from the stake the string with the little stick which was fastened to it, went again into the water, where I found, that lying on my back, and holding the stick in my hands, I was drawn along the surface of the water in a very agreeable manner. Having then engaged another boy to carry my clothes round the pond, to a place which I pointed out to him on the other side, I began to cross the pond with my kite, which carried me quite over without the least fatigue, and with the greatest pleasure imaginable. I was only obliged occasionally to halt a little in my course, and resist its progress, when it appeared that, by following too quick, I lowered the kite too much ; by doing which occasionally I made it rise again. I have never since that time practised this singular mode of swimming, though I think it not impossible to cross in this manner from Dover to Calais. The packet-boat, however, is still preferable. * * *

B. FRANKLIN.

ON THE FREE USE OF AIR.

To M. Dubourg.

London, July 28, 1780.

* * * I GREATLY approve the epithet which you give, in your letter of the 8th of June, to the new method of treating the small-pox, which you call the *tonic* or bracing method ; I will take occasion, from it, to mention a practice to which I have accustomed myself. You know the cold bath has long been in vogue here as a tonic ; but the shock of the cold water has always appeared to me, generally speaking, as too violent ; and I have found it much more agreeable to my constitution to bathe in another element—I mean cold air. With this view I rise almost every morning, and sit in my chamber without any clothes whatever, half an hour or an hour, according to the season, either reading or writing. This practice is not in the least painful, but, on the contrary, agreeable ; and if I return to bed afterwards, before I dress myself, as sometimes happens, I make a supplement to my night's rest of one or two hours of the most pleasing sleep that can be imagined. I find no ill consequences whatever resulting from it, and that at least it does not injure my health, if it does not in fact contribute much to its preservation. I shall therefore call it for the future a *bracing* or *tonic* bath. * * *

B. FRANKLIN.

ON THE CAUSES OF COLDS.

* * * I SHALL not attempt to explain why damp clothes occasion colds rather than wet ones, because I doubt the fact; I imagine that neither the one nor the other contribute to this effect, and that the causes of colds are totally independent of wet, and even of cold. I propose writing a short paper on this subject, the first moment of leisure I have at my disposal. In the mean time, I can only say, that having some suspicions that the common notion, which attributes to cold the property of stopping the pores and obstructing perspiration, was ill founded, I engaged a young physician, who is making some experiments with Sanctorius's balance, to estimate the different proportions of his perspiration, when remaining one hour quite naked, and another warmly clothed. He pursued the experiment in this alternate manner for eight hours successively, and found his perspiration almost double during those hours in which he was naked. * * *

B. FRANKLIN.

TENDENCY OF RIVERS TO THE SEA.—EFFECT OF
THE SUN'S RAYS ON CLOTHS OF DIFFERENT CO-
LOURS.*To Miss Stephenson.*

MY DEAR FRIEND,

Sept. 20, 1764.

It is, as you observed in our late conversation, a very general opinion, that *all rivers run into the sea*, or deposit their waters there. 'Tis a kind of auda-

city to call such general opinions in question, and may subject one to censure. But we must hazard something in what we think the cause of truth : and if we propose our objections modestly, we shall, though mistaken, deserve a censure less severe, than when we are both mistaken and insolent.

That some rivers run into the sea is beyond a doubt : such, for instance, are the Amazons, and I think the Oronoko and the Mississippi. The proof is that their waters are fresh quite to the sea, and out to some distance from the land. Our question is, whether the fresh waters of those rivers whose beds are filled with salt water to a considerable distance up from the sea (as the Thames, the Delaware, and the rivers that communicate with Chesapeake-bay in Virginia) do ever arrive at the sea. And as I suspect they do not, I am now to acquaint you with my reasons ; or, if they are not allowed to be reasons, my conceptions, at least, of this matter.

The common supply of rivers is from springs, which draw their origin from rain that has soaked into the earth. The union of a number of springs forms a river. The waters as they run, exposed to the sun, air, and wind, are continually evaporating. Hence in travelling one may often see where a river runs, by a long blueish mist over it, though we are at such a distance as not to see the river itself. The quantity of this evaporation is greater or less, in proportion to the surface exposed by the same quantity of water to those causes of evaporation. While the river runs in a narrow confined channel in the upper

hilly country, only a small surface is exposed ; a greater, as the river widens. Now if a river ends in a lake, as some do, whereby its waters are spread so wide as that the evaporation is equal to the sum of all its springs, that lake will never overflow. And if instead of ending in a lake, it was drawn into greater length as a river, so as to expose a surface equal in the whole to that lake, the evaporation would be equal, and such river would end as a canal ; when the ignorant might suppose, as they actually do in such cases, that the river loses itself by running under ground, whereas in truth it has run up into the air.

Now, many rivers that are open to the sea widen much before they arrive at it, not merely by the additional waters they receive, but by having their course stopped by the opposing flood-tide, by being turned back twice in twenty-four hours, and by finding broader beds in the low flat countries to dilate themselves in ; hence the evaporation of the fresh water is proportionably increased ; so that in some rivers it may equal the springs of supply. In such cases, the salt water comes up the river, and meets the fresh in that part where, if there were a wall or bank of earth across from side to side, the river would form a lake, fuller indeed at some times than at others, according to the seasons, but whose evaporation would, one time with another, be equal to its supply.

When the communication between the two kinds of water is open, this supposed wall of separation may

be conceived as a moveable one, which is not only pushed some miles higher up the river by every flood-tide from the sea, and carried down again as far by every tide of ebb, but which has even this space of vibration removed nearer to the sea in wet seasons, when the springs and brooks in the upper country are augmented by the falling rains, so as to swell the river; and farther from the sea in dry seasons.

Within a few miles above and below this moveable line of separation, the different waters mix a little, partly by their motion to and fro, and partly from the greater specific gravity of the salt water, which inclines it to run under the fresh, while the fresh water, being lighter, runs over the salt.

Cast your eye on the map of North America, and observe the bay of Chesapeak in Virginia, mentioned above; you will see, communicating with it by their mouths, the great rivers Susquehannah, Potomack, Rappahanock, York, and James, besides a number of smaller streams, each as big as the Thames. It has been proposed by philosophical writers, that to compute how much water any river discharges into the sea in a given time, we should measure its depth and swiftness at any part above the tide; as, for the Thames, at Kingston or Windsor, But can one imagine, that if all the water of those vast rivers went to the sea, it would not first have pushed the salt water out of that narrow mouthed bay, and filled it with fresh? The Susquehannah alone would seem to be sufficient for this, if it were

not for the loss by evaporation ; and yet that bay is salt quite up to Annapolis.

As to our other subject, the different degrees of heat imbibed from the sun's rays by cloths of different colours, since I cannot find the notes of my experiment to send you, I must give it as well as I can from memory.

But first let me mention an experiment you may easily make yourself. Walk but a quarter of an hour in your garden when the sun shines, with a part of your dress white, and a part black ; then apply your hand to them alternately, and you will find a very great difference in their warmth. The black will be quite hot to the touch, the white still cool.

Another : Try to fire paper with a burning-glass. If it is white, you will not easily burn it ; but if you bring the focus to a black spot, or upon letters written or printed, the paper will immediately be on fire under the letters.

Thus fullers and dyers find black cloths, of equal thickness with white ones, and hung out equally wet, dry in the sun much sooner than the white, being more readily heated by the sun's rays. It is the same before a fire ; the heat of which sooner penetrates black stockings than white ones, and so is apt sooner to burn a man's shins. Also beer much sooner warms in a black mug set before the fire, than in a white one, or in a bright silver tankard.

My experiment was this : I took a number of little square pieces of broad cloth from a tailor's pattern-



card, of various colours. There were black, deep blue, lighter blue, green, purple, red, yellow, white, and other colours or shades of colours. I laid them all out upon the snow in a bright sunshiny morning. In a few hours (I cannot now be exact as to the time) the black being warmed most by the sun, was sunk so low as to be below the stroke of the sun's rays ; the dark blue almost as low ; the lighter blue not quite so much as the dark ; the other colours less as they were lighter ; and the quite white remained on the surface of the snow, not having entered it at all.

What signifies philosophy that does not apply to some use ? May we not learn from hence, that black clothes are not so fit to wear in a hot sunny climate or season, as white ones ; because in such clothes the body is more heated by the sun when we walk abroad, and are at the same time heated by the exercise ; which double heat is apt to bring on putrid dangerous fevers ? that soldiers and seamen, who must march and labour in the sun, should in the East or West Indies have an uniform of white ? that summer hats, for men or women should be white, as repelling that heat which gives head-aches to many, and to some the fatal stroke that the French call the *coup de soleil* ? that the ladies' summer hats, however, should be lined with black, as not reverberating on their faces those rays which are reflected upwards from the earth or water ? that the putting a white cap of paper or linen *within* the crown of a black hat, as some do, will not keep out the heat, though it would if placed *without* ? that fruit-walls being blacked may receive

so much heat from the sun in the day-time, as to continue warm in some degree through the night, and thereby preserve the fruit from frosts, or forward its growth?—with sundry other particulars of less or greater importance, that will occur from time to time to attentive minds? I am, yours affectionately,

B. FRANKLIN.

ON THE MAGNETISM AND THEORY OF THE EARTH.

To the Abbe Soularie.

SIR,


Passy, Sept. 22, 1782.

I RETURN the papers with some corrections. I did not find coal-mines under the calcareous rock in Derbyshire. I only remarked, that at the lowest part of that rocky mountain which was in sight, there were oyster shells mixed in the stone; and part of the high county of Derby being probably as much above the level of the sea, as the coal mines of Whitehaven were below it, seemed a proof, that there had been a great *bouleversement* in the surface of that island, some part of it having been depressed under the sea, and other parts, which had been under it, being raised above it. Such changes in the superficial parts of the globe seemed to me unlikely to happen, if the earth were solid to the centre. I therefore imagined, that the internal parts might be a fluid more dense, and of greater specific gravity than any of the solids we are acquainted with, which therefore might swim in or upon that fluid. Thus the surface of the globe would be a shell, capable of being brok-

en and disordered by the violent movements of the fluid on which it rested. And as air has been compressed by art so as to be twice as dense as water, in which case, if such air and water could be contained in a strong glass vessel, the air would be seen to take the lowest place, and the water to float above and upon it ; and as we know not yet the degree of density to which air may be compressed, and M. Amon-ton's calculated, that its density increasing as it approached the centre, in the same proportion as above the surface, it would, at the depth of leagues, be heavier than gold, possibly the dense fluid occupying the internal parts of the globe might be air compressed. And as the force of expansion in dense air when heated is in proportion to its density, this central air might afford another agent to move the surface, as well as be of use in keeping alive the subterraneous fires ; though as you observe, the sudden rarefaction of water coming into contact without those fires, may also be an agent sufficiently strong for that purpose, when acting between the incumbent earth and the fluid on which it rests.

If one might indulge imagination in supposing how such a globe was formed, I should conceive, that all the elements in separate particles being originally mixed in confusion, and occupying a great space, they would (as soon as the almighty fiat ordained gravity, or the mutual attraction of certain parts, and the mutual repulsion of others, to exist) all move to their common centre. that the air being a fluid whose parts repel each other, though drawn to

the common centre by their gravity, would be densest towards the centre, and rarer as more remote ; consequently all matters lighter than the central parts of that air, and immersed in it, would recede from the centre, and rise till they arrived at that region of the air which was of the same specific gravity with themselves, where they would rest ; while other matter, mixed with the lighter air, would descend, and the two meeting would form the shell of the first earth, leaving the upper atmosphere nearly clear. The original movement of the parts towards their common centre would naturally form a whirl there, which would continue upon the turning of the new-formed globe upon its axis, and the greatest diameter of the shell would be in its equator. If by any accident afterwards the axis should be changed, the dense internal fluid, by altering its form must burst the shell, and throw all its substance into the confusion in which we find it. I will not trouble you at present with my fancies concerning the manner of forming the rest of our system. Superior beings smile at our theories, and at our presumption in making them. I will just mention, that your observation of the ferruginous nature of the lava which is thrown out from the depths of our volcanoes, gave me great pleasure. It has long been a supposition of mine, that the iron contained in the surface of the globe has made it capable of becoming, as it is, a great magnet ; that the fluid of magnetism perhaps exists in all space ; so that there is a magnetical north and south of the universe, as well



as of this globe, and that if it were possible for a man to fly from star to star, he might govern his course by the compass ; that it was by the power of this general magnetism this globe became a particular magnet. In soft or hot iron the fluid of magnetism is naturally diffused equally ; when within the influence of the magnet it is drawn to one end of the iron, made denser there and rarer at the other. While the iron continues soft and hot, it is only a temporary magnet ; if it cools or grows hard in that situation, it becomes a permanent one, the magnetic fluid not easily resuming its equilibrium. Perhaps it may be owing to the permanent magnetism of this globe, which it had not at first, that its axis is at present kept parallel to itself, and not liable to the changes it formerly suffered, which occasioned the rupture of its shell, the submersions and emersions of its lands, and the confusion of its seasons. The present polar and equatorial diameters differing from each other near ten leagues, it is easy to conceive, in case some power should shift the axis gradually, and place it in the present equator, and make the new equator pass through the present poles, what a sinking of the waters would happen in the present equatorial regions, and what a rising in the present polar regions ! so that vast tracts would be discovered, that now are under water, and others covered, that are now dry, the water rising and sinking in the different extremes near five leagues. Such an operation as this possibly occasioned much of Europe, and among the rest this mountain of Passy on which I

live and which is composed of limestone, rock, and sea-shells, to be abandoned by the sea, and to change its ancient climate, which seems to have been a hot one. The globe being now become a perfect magnet, we are, perhaps, safe from any change of its axis. But we are still subject to the accidents on the surface, which are occasioned by a wave in the internal ponderous fluid ; and such a wave is producible by the sudden violent explosion you mention, happening from the junction of water and fire under the earth, which not only lifts the incumbent earth that is over the explosion, but impressing with the same force the fluid under it, creates a wave, that may run a thousand leagues, lifting, and thereby shaking, successively, all the countries under which it passes. I know not whether I have expressed myself so clearly as not to get out of your sight in these reveries. If they occasion any new inquiries, and produce a better hypothesis, they will not be quite useless. You see I have given a loose to imagination ; but I approve much more your method of philosophising, which proceeds upon actual observation, makes a collection of facts, and concludes no farther than those facts will warrant. In my present circumstances, that mode of studying the nature of the globe is out of my power, and therefore I have permitted myself to wander a little in the wilds of fancy. With great esteem, I have the honour to be, sir, &c.

B. FRANKLIN.

P. S. I have heard that chymists can by their art decompose stone and wood, extracting a considera-

ble quantity of water from the one, and air from the other. It seems natural to conclude from this, that water and air were ingredients in their original composition: for men cannot make new matter of any kind. In the same manner may we not suppose, that when we consume combustibles of all kinds, and produce heat or light, we do not create that heat or light, but only decompose a substance, which received it originally as a part of its composition? Heat may be thus considered as originally in a fluid state; but, attracted by organized bodies in their growth, becomes a part of the solid. Besides this, I can conceive, that in the first assemblage of the particles of which this earth is composed, each brought its portion of the loose heat that had been connected with it, and the whole, when pressed together, produced the internal fire that still subsists.

QUERIES AND CONJECTURES RELATING TO MAGNETISM AND THE THEORY OF THE EARTH.

To Mr. Bodoïn.

DEAR SIR,

I RECEIVED your favours by Messrs. Gore, Hilliard, and Lee, with whose conversation I was much pleased, and wished for more of it; but their stay with us was too short. Whenever you recommend any of your friends to me, you oblige me.

I want to know whether your Philosophical Society received the second volume of our Transactions. I sent it; but never heard of its arriving. If it miscarried, I will send another. Has your Society

among its books the French work *sur les Arts, et les etiers*? It is voluminous, well executed, and may be useful in our country. I have bequeathed it them in my will; but if they have it already, I will substitute something else.

Our ancient correspondence used to have something philosophical in it. As you are now more free from public cares, and I expect to be so in a few months, why may we not resume that kind of correspondence? Our much regretted friend Winthrop once made me the compliment, that I was good at starting game for philosophers: let me try if I can start a little for you.

Has the question, 'How came the earth by its magnetism,' ever been considered?

Is it likely that iron ore immediately existed when this globe was first formed; or may it not rather be supposed a gradual production of time?

If the earth is at present magnetical, in virtue of the masses of iron ore contained in it, might not some ages pass before it had magnetic polarity?

Since iron ore may exist without that polarity, and by being placed in certain circumstances may obtain it from an external cause, is it not possible that the earth received its magnetism from some such cause?

In short, may not a magnetic power exist throughout our system, perhaps through all systems, so that if men could make a voyage in the starry regions, a compass might be of use? And may not such universal magnetism, with its uniform direction, be

serviceable in keeping the diurnal revolution of a planet more steady to the same axis ?

Lastly, as the poles of magnets may be changed by the presence of stronger magnets, might not, in ancient times, the near passing of some large comet of greater magnetic power than this globe of ours have been a means of changing its poles, and thereby wrecking and deranging its surface, placing in different regions the effect of centrifugal force, so as to raise the waters of the sea in some, while they were depressed in others ?

Let me add another question or two, not relating indeed to magnetism, but, however, to the theory of the earth.

Is not the finding of great quantities of shells and bones of animals (natural to hot climates) in the cold ones of our present world, some proof that its poles have been changed ? Is not the supposition that the poles have been changed, the easiest way of accounting for the deluge, by getting rid of the old difficulty how to dispose of its waters after it was over ? Since if the poles were again to be changed, and placed in the present equator, the sea would fall there about fifteen miles in height, and rise as much in the present polar regions ; and the effect would be proportionable, if the new poles were placed any where between the present and the equator.

Does not the apparent wreck of the surface of this globe, thrown up into long ridges of mountains, with strata in various positions, make it probable that its internal mass is a fluid—but a fluid so dense

as to float the heaviest of our substances ? Do we know the limit of condensation air is capable of ? Supposing it to grow denser *within* the surface, in the same proportion nearly as it does *without*, at what depth may it be equal in density with gold ?

Can we easily conceive how the strata of the earth could have been so deranged, if it had not been a mere shell supported by a heavier fluid ? Would not such a supposed internal fluid globe be immediately sensible of a change in the situation of the earth's axis, alter its form, and thereby burst the shell, and throw up parts of it above the rest ? As, if we would alter the position of the fluid contained in the shell of an egg, and place its longest diameter where the shortest now is, the shell must break ; but would be much harder to break. if the whole internal substance were as solid and hard as the shell.

Might not a wave, by any means raised in this supposed internal ocean of extremely dense fluid, raise, in some degree, as it passes, the present shell of incumbent earth, and break it in some places, as in earthquakes ? And may not the progress of such wave, and the disorders it occasions among the solids of the shell, account for the rumbling sound being first heard at a distance, augmenting as it approaches, and gradually dying away as it proceeds ? A circumstance observed by the inhabitants of South America in their last great earthquake ; that noise coming from a place some degrees north of Lima, and being traced by inquiry quite down to Buenos

Ayres, proceeded regularly from north to south at the rate of leagues per minute, as I was informed by a very ingenious Peruvian, whom I met with at Paris.

B. FRANKLIN.

ON THE NATURE OF SEA COAL.

To M. Dubourg.

* * * * I AM persuaded, as well as you, that the sea coal has a vegetable origin, and that it has been formed near the surface of the earth ; but as preceding convulsions of nature had served to bring it very deep in many places, and covered it with many different strata, we are indebted to subsequent convulsions for having brought within our view the extremities of its veins, so as to lead us to penetrate the earth in search of it. I visited last summer a large coal-mine at Whitehaven, in Cumberland ; and in following the vein, and descending by degrees towards the sea, I penetrated below the ocean, where the level of its surface was more than eight hundred fathoms above my head ; and the miners assured me that their works extended some miles beyond the place where I then was, continually and gradually descending under the sea. The slate, which forms the roof of this coal mine, is impressed in many places with the figures of leaves and branches of fern, which undoubtedly grew at the surface when the slate was in a state of sand on the banks of the sea. Thus it appears that this vein of coal has suffered a prodigious settlement. * * * *

B. FRANKLIN.

EFFECT OF VEGETATION ON NOXIOUS AIR.

To Dr. Priestley.

* * * THAT the vegetable creation should restore the air which is spoiled by the animal part of it, looks like a rational system, and seems to be of a piece with the rest. Thus fire purifies water all the world over. It purifies it by distillation, when it raises it in vapours, and lets it fall in rain ; and farther still by filtration, when, keeping it fluid, it suffers that rain to percolate the earth. We knew before, that putrid animal substances were converted into sweet vegetables, when mixed with the earth, and applied as manure ; and now it seems that the same putrid substances, mixed with the air, have a similar effect. The strong thriving state of your mint, in putrid air, seems to show that the air is mended by taking something from it, and not by adding to it. I hope this will give some check to the rage of destroying trees that grow near houses, which has accompanied our late improvements in gardening, from an opinion of their being unwholesome. I am certain, from long observation, that there is nothing unhealthy in the air of woods ; for we Americans have every where our country habitations in the midst of woods, and no people on earth enjoy better health, or are more prolific. * * *

B. FRANKLIN.

OBSERVATIONS ON THE PREVAILING DOCTRINES
OF LIFE AND DEATH.*To M. Dubourg.**

* * * YOUR observations on the causes of death, and the experiments which you propose for recalling to life those who appear to be killed by lightning, demonstrate equally your sagacity and your humanity. It appears, that the doctrines of life and death, in general, are yet but little understood.

A toad buried in sand will live, it is said, till the sand becomes petrified : and then, being enclosed in the stone, it may still live for we know not how many ages. The facts which are cited in support of this opinion are too numerous, and too circumstantial, not to deserve a certain degree of credit. As we are accustomed to see all the animals, with which we are acquainted, eat and drink, it appears to us difficult to conceive how a toad can be supported in such a dungeon ; but if we reflect, that the necessity of nourishment, which animals experience in their ordinary state, proceeds from the continual waste of their substance by perspiration, it will appear less incredible, that some animals, in a torpid state, perspiring less because they use no exercise, should have less need of aliment ; and that others, which are covered with scales or shells, which stop perspiration, such as land and sea-turtles, serpents, and some species of fish, should be able to subsist

* This letter is translated from the French edition of Dr. Franklin's works. It has no date, but the letter to which it is an answer is dated 15th April, 1773.

a considerable time without any nourishment whatever. A plant, with its flowers, fades and dies immediately, if exposed to the air without having its root immersed in a humid soil, from which it may draw a sufficient quantity of moisture to supply that which exhales from its substance and is carried off continually by the air. Perhaps, however, if it were buried in quicksilver, it might preserve for a considerable space of time its vegetable life, its smell, and colour. If this be the case, it might prove a commodious method of transporting from distant countries those delicate plants, which are unable to sustain the inclemency of the weather at sea, and which require particular care and attention. I have seen an instance of common flies preserved in a manner somewhat similar. They had been drowned in Madeira wine, apparently about the time when it was bottled in Virginia, to be sent hither (to London.) At the opening of one of the bottles, at the house of a friend where I then was, three drowned flies fell into the first glass that was filled. Having heard it remarked that drowned flies were capable of being revived by the rays of the sun, I proposed making the experiment upon these : they were, therefore, exposed to the sun upon a seive, which had been employed to strain them out of the wine. In less than three hours, two of them began by degrees to recover life. They commenced by some convulsive motions of the thighs, and at length they raised themselves upon their legs, wiped their eyes with their fore-feet, beat and brushed their wings with their hind-feet,



and soon after began to fly, finding themselves in Old England, without knowing how they came thither. The third continued lifeless till sunset, when, losing all hopes of him, he was thrown away.

I wish it were possible, from this instance, to invent a method of embalming drowned persons, in such a manner that they may be recalled to life at any period, however distant; for having a very ardent desire to see and observe the state of America a hundred years hence, I should prefer to any ordinary death, the being immersed in a cask of Madeira wine, with a few friends, all that time, to be then recalled to life by the solar warmth of my dear country! But since, in all probability, we live in an age too early and too near the infancy of science, to hope to see such an art brought in our time to its perfection, I must for the present content myself with the treat, which you are so kind as to promise me, of the resurrection of a fowl or a turkey-cock.

I am, &c.

B. FRANKLIN.

AN ALLEGORICAL DREAM.

IN a dream, I thought my self in a solitary temple. I saw a kind of phantom coming towards me, but as he drew near his form expanded and became more than human; his robe hung majestically down to his feet; six wings, whiter than snow, whose extremities were edged with gold, covered a part of his body: then I saw him quit his material substance, which he had put on to avoid terrifying me; his body was of all

the colours in the rainbow. He took me by the hair, and I was sensible I was travelling in the æthereal plains without any dread, with the rapidity of an arrow sent from a bow, drawn by a supple and nervous arm. A thousand glowing orbs rolled beneath me : but I could only cast a rapid glance on all those globes distinguished by the striking colours with which they were diversified. I now suddenly perceived so beautiful, so flourishing, so fertile, a country, that I conceived a strong desire to alight upon it. My wishes were instantly gratified ; I felt myself gently landed on its surface, where I was surrounded by a balmy atmosphere. I found myself reposed at the dawn, upon the soft verdant grass. I stretched out my arms, in token of gratitude, to my celestial guide, who pointed to a resplendent sun, towards which swiftly rising, he disappeared in the luminous body. I arose, and imagined myself to be transported to the garden of Eden. Every thing inspired my soul with soft tranquillity. The most profound peace covered this new globe ; nature was here ravishing and incorruptible, and a delicious freshness expanded my sense to ecstasy ; a sweet odour accompanied the air I breathed ; my heart, which beat with an unusual power, was immersed in a sea of rapture ; while pleasure, like a pure and immortal light, penetrated the inmost recesses of my soul. The inhabitants of this happy country came to meet me ; and, after saluting me, they took me by the hand. Their noble countenances inspired confidence and respect ; innocence and happiness were depicted

in their looks; they often lifted their eyes towards heaven, and as often uttered a name which I afterwards knew to be that of the Eternal, while their cheeks were moistened with tears of gratitude. I experienced great emotion while I conversed with these sublime beings. They poured out their hearts with the most sincere tenderness; and the voice of reason most majestic, and no less melting, was at the same time conveyed to my enraptured ear. I soon perceived that this abode was totally different from that which I had left. A divine impulse made me fly into their arms:—I bowed my knees to them; but being raised up in the most endearing manner I was pressed to the bosom which inclosed such excellent hearts, and I conceived a presentiment of celestial amity, of that amity which united their souls, and formed the greatest portion of their felicity. The angel of darkness, with all his artifice, was never able to discover the entrance into this world!—notwithstanding his ever-watchful malice, he never found out the means to spread his poison over this happy globe. Anger, envy, and pride, were there unknown; the happiness of one appeared the happiness of all; an ecstatic transport incessantly elevating their souls at the sight of the magnificent and bountiful hand which collected over their heads the most astonishing prodigies of the creation. The lovely morning, with her humid saffron wings distilled the pearly dew from the shrubs and flowers, and the rays of the rising sun multiplied the most enchanting colours, when I perceived a wood embellished by

the opening dawn. The youth of both sexes there sent forth hymns of adoration towards heaven ; and were filled at the same time with the grandeur and majesty of God, which rolled almost visibly over their heads ; for in this world of innocence, he vouchsafed to manifest himself by means unknown to our weak understandings. All things announced his august presence, the serenity of the air, the dyes of the flowers, the brilliancy of the insects, a kind of universal sensibility spread over all beings, whose vivified bodies seemed entirely susceptible of it. Every thing bore the appearance of sentiment ; and the birds stopped in the midst of their flight, as if attentive to the affecting modulations of their voices. But no pencil can express the ravishing countenance of the young beauties, whose bosoms breathed love. Who can describe that love of which we have not any idea, that love for which we have no name, that love, the lot of pure intelligent beings, divine love, which they only can conceive and feel ; the tongue of man, incapable, must be silent ! The remembrance of this enchanting place suspends at this moment all the faculties of my soul. The sun was rising—the pencil falls from my hand. O, Thomson, never did thy muse view such a sun ! What a world, and what magnificent order ! I trod, with regret, on the flowery plants, endued, like that we call sensitive, with a quick and lively feeling ; they bent under my foot, only to rise with more brilliancy ; the fruit gently dropped, on the first touch, from the complying branch, and had scarcely gratified the palate when

the delicious sensation of its juices was felt glowing in every vein ; the eye, more piercing, sparkled with uncommon lustre ; the ear was more lively ; the heart, which expanded itself over all nature, seemed to possess and enjoy its fertile extent : the universal enjoyment did not disturb any individual ; for union multiplied their delights, and they esteemed themselves less happy in their own fruition than in the happiness of others. This sun did not resemble the comparative paleness and weakness which illuminates our gloomy terrestrial prison ; yet the eye could bear to gaze on it, and, in a manner, plunge itself in a kind of ecstasy in its mild and pure light ; it enlivened at once the sight and the understanding, and even penetrated the soul. The bodies of those fortunate persons became, as it were, transparent ; while each read in his brother's heart the sentiments of affability and tenderness with which himself was affected. There darted from the leaves of all the shrubs which the planet enlightened, a luminous matter, which resembled, at a distance, all the colours of the rainbow ; its orb, which was never eclipsed, was crowned with such sparkling rays that the daring prism of Newton could not divide. When this planet set, six brilliant moons floated in the atmosphere ; their progression in different orbits, each night formed a new exhibition. The multitude of stars, which seem to us as if scattered by chance, were here seen in their true point of view, and the order of the universe appeared in all its pomp and splendour. In this happy country, when a man gave

way to sleep, his body, which had none of the properties of terrestrial elements, gave no opposition to the soul, but contemplated in a vision bordering on reality, the lucid region, the throne of the Eternal, to which it was soon to be elevated. Men awaked from a light slumber without perturbation or uneasiness ; enjoying futurity by a forcible sentiment of immortality, being intoxicated with the image of an approaching felicity, exceeding that which they already enjoyed. Grief, the fatal result of the imperfect sensibility of our rude frames, was unknown to these innocent men ; a light sensation warned them of the objects which could hurt them ; and nature removed them from the danger, as a tender mother would gently draw her child by the hand from a pitfall. I breathed more freely in this habitation of joy and concord ; my existence became most valuable to me ; but in proportion as the charms which surrounded me were lively, the greater was my sorrow when my ideas returned to the globe I had quitted. All the calamities of the human race united, as in one point, to overwhelm my heart, and I exclaimed piteously—" Alas ! the world I inhabited formerly resembled your's : but peace, innocence, and chaste pleasures, soon vanished. Why was I not born among you ? what a contrast ! the earth which was my sorrowful abode is incessantly filled with tears and sighs ; there the smaller number oppress the greater ; the demon of property infects what he touches, and what he covets. Gold is there a god, and they sacrifice on his altar love, humanity,

and the most valuable virtues. Shudder, you who hear me ! the greatest enemy which man has is man ; his chiefs are his tyrants ; they make all things bend under the yoke of their pride or their caprice ; the chains of oppression are in a manner extended from pole to pole ; a monster who assumes the mask of glory, makes lawful whatever is most horrible, violence and murder. Since the fatal invention of an inflammable powder, no mortal can say, to-morrow I shall repose in peace :—to-morrow the arm of despotism will not crush my head ;—to-morrow dreadful sorrow will not depress my soul ;—to-morrow the wailings of an useless despair, proceeding from a distressed heart, will not escape my lips, and tyranny bury me alive as in a stone coffin ! Oh, my brethren ! weep, weep over us ! We are not only surrounded with chains and executioners, but are moreover dependant on the seasons, the elements, and the meanest insects. All nature rebels against us ; and even if we subdue her, she makes us pay dearly for the benefits our labour forces from her. The bread we eat is earned by our tears and the sweat of our brow ; then greedy men come and plunder us, to squander it on their idle favourites. Weep, weep with me, my brethren ! hatred pursues us ; revenge sharpens its poniard in the dark, calumny brands us, and even deprives us of the power of making our defence ; the object of tenderness betrays our confidence, and forces us to curse this otherwise consolatory sentiment. We must live in the midst of all the strokes of wickedness, error,

pride, and folly." While my heart gave a free course to my complaints, I saw a band of shining seraphs descending from heaven ; on which, shouts of joy were immediately sent from the whole race of these fortunate beings. As I gazed with astonishment, I was accosted by an old man, who said, "Farewel, my friend ! the moment of our death draws near ; or rather, that of a new life. The ministers of the God of clemency are come to take us away from this earth : we are going to dwell in a world of still greater perfection."

"Why, father," said I, "are you then strangers to the agonies of death, the anguish, the pain, the dread, which accompany us in our last moments ?" "Yes, my child," he replied, "these angels of the Highest come at stated periods, and carry us all away, opening to us the road to a new world, of which we have an idea by the undoubted conviction of the unlimited bounty and magnificence of the Creator." A cheeeful glow was immediately spread over their countenances ; their brows already seemed crowned with immortal splendour ; they sprang lightly from the earth in my sight ; I pressed the sacred hand of each for the last time, while with a smile they held out the other to the seraph, who had spread his wings to carry them to heaven. They ascended all at once, like a flock of beautiful swans, that, taking flight, raise themselves, with majestic rapidity, over the tops of our highest palaces. I gazed with sadness ; my eye followed them in the air, until their venerable heads were lost in the silver

clouds, and I remained alone on this magnificent deserted land. I perceived I was not yet fitted to dwell in it, and wished to return to this unfortunate world of expiation: thus the animal escaped from his keeper returns, following the track of his chain, with a mild aspect, and enters his prison. Awaking, the illusion was dispelled, which it is beyond the power of my weak tongue or pen to describe in its full splendour; but this illusion I shall for ever cherish; and, supported by the foundation of hope, I will preserve it till death, in the inmost recesses of my soul.

SINGULAR CUSTOM AMONG THE AMERICANS, ENTITLED WHITE-WASHING.

DEAR SIR,

MY wish is to give you some account of the people of these new states, but I am far from being qualified for the purpose, having as yet seen little more than the cities of New-York and Philadelphia. I have discovered but few national singularities among them. Their customs and manners are nearly the same with those of England, which they have long been used to copy. For, previous to the revolution, the Americans were from their infancy taught to look up to the English as patterns of perfection in all things. I have observed, however, one custom, which, for aught I know, is peculiar to this country. An account of it will serve to fill up the remainder of this sheet, and may afford you some amusement.

When a young couple are about to enter into the matrimonial state, a never-failing article in the marriage-treaty is, that the lady shall have and enjoy the free and unmolested exercise of the rights of *white-washing*, with all its ceremonials, privileges, and appurtenances. A young woman would forego the most advantageous connexion, and even disappoint the warmest wish of her heart, rather than resign the invaluable right. You would wonder what this privilege of *white-washing* is : I will endeavour to give you some idea of the ceremony, as I have seen it performed.

There is no season of the year in which the lady may not claim her privilege, if she pleases ; but the latter end of May is most generally fixed upon for the purpose. The attentive husband may judge by certain prognostics when the storm is nigh at hand. When the lady is unusually fretful, finds fault with the servants, is discontented with the children, and complains much of the filthiness of every thing about her—these are signs which ought not to be neglected ; yet they are not decisive, as they sometimes come on and go off again, without producing any farther effect. But if, when the husband rises in the morning, he should observe in the yard a wheel-barrow with a quantity of lime in it, or should see certain buckets with lime dissolved in water, there is then no time to be lost ; he immediately locks up the apartment or closet where his papers or his private property is kept, and putting the key in his pocket, betakes himself to flight : for a husband, how-

ever beloved, becomes a perfect nuisance during this season of female rage ; his authority is superseded, his commission is suspended, and the very scullion, who cleans the brasses in the kitchen, becomes of more consideration and importance than him. He has nothing for it, but to abdicate, and run from an evil which he can neither prevent nor mollify.

The husband gone, the ceremony begins. The walls are in a few minutes stripped of their furniture ; paintings, prints, and looking-glasses, lie in a huddled heap about the floors ; the curtains are torn from the testers, the beds crammed into the windows ; chairs and tables, bedsteads and cradles, crowd the yard ; and the garden fence bends beneath the weight of carpets, blankets, cloth cloaks, old coats, and ragged breeches. *Here* may be seen the lumber of the kitchen, forming a dark and confused mass : for the fore-ground of the picture, gridirons and frying pans, rusty shovels and broken tongs, spits and pots, joint-stools, and the fractured remains of rush-bottomed chairs. *There*, a closet has disgorged its bowels, cracked tumblers, broken wine glasses, phials of forgotten physic, papers of unknown powders, seeds, and dried herbs, handfuls of old corks, tops of teapots, and stoppers of departed decanters ;—from the rag-hole in the garret to the rat-hole in the cellar, no place escapes unrummaged. It would seem as if the day of general doom was come, and the utensils of the house were dragged forth to judgment. In this tempest, the words

of Lear naturally present themselves, and might, with some alteration, be made strictly applicable :

—————" Let the great gods,
That keep this dreadful pudder o'er our heads,
Find out their enemies now. Tremble, thou wretch
That hast within thee undivulged crimes
Unwhipt of justice!"—————

—————" Close pent-up guilt,
Raise your concealing continents, and ask
These dreadful summoners grace."

This ceremony completed, and the house thoroughly evacuated, the next operation is to smear the walls and ceilings of every room and closet with brushes dipped in a solution of lime, called *white-wash* ; to pour buckets of water over every floor, and scratch all the partitions and wainscots with rough brushes wet with soap-suds, and dipped in stone-cutter's sand. The windows by no means escape the general deluge. A servant scrambles out upon the pent-house, at the risk of her neck, and with a mug in her hand, and a bucket within reach, she dashes away innumerable gallons of water against the glass panes ; to the great annoyance of the passengers in the street.

I have been told that an action at law was once brought against one of these water nymphs, by a person who had a new suit of clothes spoiled by this operation ; but, after long argument, it was determined by the whole court, that the action would not lie, in as much as the defendant was in the exercise


of a legal right, and not answerable for the consequences ; and so the poor gentleman was doubly nonsuited ; for he lost not only his suit of clothes, but his suit at law.

These smearings and scratchings, washings and dashings, being duly performed, the next ceremonial is to cleanse and replace the distracted furniture. You may have seen a house raising, or a ship-launch, when all the hands within reach are collected together : recollect, if you can, the hurry, bustle confusion, and noise of such a scene, and you will have some idea of this cleaning match. The misfortune is that the sole object is to make things clean ; it matters not how many useful, ornamental, or valuable articles are mutilated, or suffer death under the operation : a mahogany chair and carved frame undergo the same discipline ; they are to be made *clean* at all events ; but their preservation is not worthy of attention. For instance, a fine large engraving is laid flat on the floor ; smaller prints are piled upon it, and the superincumbent weight cracks the glasses of the lower tier : but this is of no consequence. A valuable picture is placed leaning against the sharp corner of a table ; others are made to lean against that, until the pressure of the whole forces the corner of the table through the canvass of the first. The frame and glass of a fine print are to be *cleaned* ; the spirit and oil used on this occasion are suffered to leak through and spoil the engraving ; no matter, if the glass is clean, and the frame shine, it is sufficient ; the rest is not worthy of consideration. An

able arithmetician has made an accurate calculation, founded on long experience, and has discovered, that the losses and destruction incident to two white-washings are equal to one removal, and three removals equal to one fire.

The cleaning frolic over, matters begin to resume their pristine appearance. The storm abates, and all would be well again, but it is impossible that so great a convulsion, in so small a community, should not produce some farther effects. For two or three weeks after the operation, the family are usually afflicted with sore throats or sore eyes, occasioned by the caustic quality of the lime, or with severe colds from the exhalations of wet floors or damp walls.

I know a gentleman who was fond of accounting for every thing in a philosophical way. He considers this, which I have called a custom, as a real periodical disease, peculiar to the climate. His train of reasoning is ingenious and whimsical ; but I am not at leisure to give you a detail. The result was, that he found the distemper to be incurable ; but after much study he conceived he had discovered a method to divert the evil he could not subdue. For this purpose he caused a small building, about twelve feet square, to be erected in his garden, and furnished with some ordinary chairs and tables ; and a few prints of the cheapest sort were hung against the walls. His hope was, that when the white-washing frenzy seized the females of his family, they might repair to this apartment, and scrub, and smear, and



scour, to their heart's content ; and so spend the violence of the disease in this out-post, while he enjoyed himself in quiet at head-quarters. But the experiment did not answer his expectation ; it was impossible it should, since a principal part of the gratification consists in the lady's having an uncontrolled right to torment her husband at least once a year, and to turn him out of doors, and take the reins of government into her own hands.

There is a much better contrivance than this of the philosopher ; which is, to cover the walls of the house with paper ; this is generally done, and though it cannot abolish, it at least shortens, the period of female dominion. The paper is decorated with flowers of various fancies, and made so ornamental that the women have admitted the fashion without perceiving the design.

There is also another alleviation of the husband's distress ; he generally has the privilege of a small room or closet for his books and papers, the key of which he is allowed to keep. This is considered as a privileged place, and stands like the land of Goshen amid the plagues of Egypt. But then he must be extremely cautious, and ever on his guard. For should he inadvertently go abroad and leave the key in his door, the housemaid, who is always on the watch for such an opportunity, immediately enters in triumph with buckets, brooms, and brushes ; takes possession of the premises, and forthwith puts all his books and papers *to rights* : to his utter con-

fusion, and sometimes serious detriment. For instance :

A gentleman was sued by the executors of a tradesman, on a charge found against him in the deceased's books, to the amount of £80. The defendant was strongly impressed with an idea that he had discharged the debt and taken a receipt ; but, as the transaction was of long standing, he knew not where to find the receipt. The suit went on in course, and the time approached when judgment would be obtained against him. He then sat seriously down to examine a large bundle of old papers, which he had untied and displayed on a table for that purpose. In the midst of his search, he was suddenly called away on business of importance ; he forgot to lock the door of his room. The house-maid, who had been long looking out for such an opportunity, immediately entered with the usual implements, and with great alacrity fell to cleaning the room, and putting things *to rights*. The first object that struck her eye was the confused situation of the papers on the table ; these were without delay bundled together like so many dirty knives and forks ; but in the action a small piece of paper fell unnoticed on the floor, which happened to be the very receipt in question : as it had no very respectable appearance, it was soon after swept out with the common dirt of the room, and carried in a rubbish pan into the yard. The tradesman had neglected to enter the credit in his book ; the defendant



could find nothing to obviate the charge, and so judgment went against him for the debt and costs. A fortnight after the whole was settled, and the money paid, one of his children found the receipt among the rubbish in the yard.

There is also another custom peculiar to the city of Philadelphia, and nearly allied to the former. I mean that of washing the pavement before the doors every Saturday evening. I at first took this to be a regulation of the police : but on a further inquiry find it is a religious rite, preparatory to the Sabbath ; and is, I believe, the only religious rite in which the numerous sectaries of this city perfectly agree. The ceremony begins about sun-set, and continues till about ten or eleven at night. It is very difficult for a stranger to walk the streets on those evenings ; he runs a continual risk of having a bucket of dirty water thrown against his legs : but a Philadelphian born is so much accustomed to the danger, that he avoids it with surprising dexterity. It is from this circumstance that a Philadelphian may be known any where by his gait. The streets of New-York are paved with rough stones ; these indeed are not washed, but the dirt is so thoroughly swept from before the doors, that the stones stand up sharp and prominent, to the great inconvenience of those who are not accustomed to so rough a path. But habit reconciles every thing. It is diverting enough to see a Philadelphian at New-York ; he walks the streets with as much painful caution, as if his toes were covered with corns, or his feet lamed with the

gout: while a New-Yorker, as little approving the plain masonry of Philadelphia, shuffles along the pavement like a parrot on a mahogany table.

It must be acknowledged, that the ablutions I have mentioned are attended with no small inconvenience; but the women would not be induced, from any consideration, to resign their privilege. Notwithstanding this, I can give you the strongest assurances, that the women of America make the most faithful wives and the most attentive mothers in the world; and I am sure you will join me in opinion, that if a married man is made miserable only *one* week in a whole year, he will have no great cause to complain of the matrimonial bond.

I am, &c.

ANSWER TO THE ABOVE.

SIR,


I HAVE lately seen a letter upon the subject of *white-washing*, in which that necessary duty of a good housewife is treated with unmerited ridicule. I should probably have forgot the foolish thing by this time; but the season coming on which most women think suitable for cleansing their apartments from the smoke and dirt of the winter, I find this saucy author dished up in every family, and his flippant performance quoted wherever a wife attempts to exercise her reasonable prerogative, or execute the duties of her station. Women generally employ their time to better purpose than scribbling. The

cares and comforts of a family rest principally upon their shoulders ; hence it is that there are but few female authors ; and the men, knowing how necessary our attentions are to their happiness, take every opportunity of discouraging literary accomplishments in the fair sex. You hear it echoed from every quarter—" My wife cannot make verses, it is true ; but she makes an excellent pudding ; she cannot correct the press, but she can correct her children, and scold her servants with admirable discretion ; she cannot unravel the intricacies of political economy and federal government, but she can knit charming stockings." And this they call praising a wife, and doing justice to her character, with much nonsense of the like kind.

I say, women generally employ their time to much better purpose than scribbling ; otherwise this facetious writer had not gone so long unanswered. We have ladies who sometimes lay down the needle and take up the pen ; I wonder none of them have attempted some reply. For my part, I do not pretend to be an author. I never appeared in print in my life, but I can no longer forbear saying something in answer to such impertinence, circulate how it may. Only, Sir, consider our situation. Men are naturally inattentive to the decencies of life ; but why should I be so complaisant ? I say, they are naturally filthy creatures. If it were not that their connexion with the refined sex polished their manners, and had a happy influence on the general economy of life, these lords of the creation would wallow in

filth, and populous cities would infect the atmosphere with their noxious vapours. It is the attention and assiduity of women that prevent men from degenerating into mere swine. How important then are the services we render ; and yet for these very services we are made the subject of ridicule and fun. Base ingratitude ! Nauseous creatures ! Perhaps you may think I am in a passion. No, Sir, I do assure you I never was more composed in my life ; and yet it is enough to provoke a saint to see how unreasonably we are treated by the men. Why now, there's my husband—a good enough sort of a man in the main—but I will give you a sample of him.

He comes into the parlour the other day, where, to be sure, I was cutting up a piece of linen—"Lord !" says he, "what a flutter here is ! I can't bear to see the parlour look like a tailor's shop : besides, I am going to make some important philosophical experiments, and must have sufficient room." You must know, my husband is one of your would-be philosophers. Well, I bundled up my linen as quick as I could, and began to darn a pair of ruffles, which took no room, and could give no offence. I thought, however, I would watch my lord and master's important business. In about half an hour, the tables were covered with all manner of trumpery ; bottles of water, phials of drugs, pasteboard, paper, and cards, glue, paste, and gum-arabic ; files, knives, scissors, and needles ; rosin, wax, silk, thread, rags, jags, tags, books, pamphlets, and papers. Lord bless me ! I am almost out of breath, and yet I



have not enumerated half the articles ; well, to work he went, and though I did not understand the object of his manœuvres, yet I could sufficiently discover that he did not succeed in any one operation. I was glad of that, I confess, and with good reason too : for, after he had fatigued himself with mischief, like a monkey in a china-shop, and had called the servants to clear every thing away, I took a view of the scene my parlour exhibited. I shall not even attempt a minute description ; suffice it to say, that he had upset his ink-stand, and stained my best mahogany table with ink ; he had spilt a quantity of vitriol, and burnt a large hole in my carpet : my marble hearth was all over spotted with melted rosin ; besides this, he had broken three china cups, four wine glasses, two tumblers, and one of my handsomest decanters. And, after all, as I said before, I perceived that he had not succeeded in any one operation. By the bye, tell your friend, the white-wash scribbler, that this is one means by which our closets become furnished with “halves of China bowls, cracked tumblers, broken wine-glasses, tops of tea-pots, and stoppers of departed decanters.” I say, I took a view of the dirt and devastation my philosophic husband had occasioned ; and there I sat, like Patience on a monument, smiling at grief : but it worked inwardly. I would almost as soon the melted rosin and vitriol had been in his throat, as on my dear marble hearth and my beautiful carpet. It is not true that women have no power over their own feelings ; for, notwithstanding this provocation,

I said nothing, or next to nothing: for I only observed, very pleasantly, what a lady of my acquaintance had told me, that the reason why philosophers are called *literary* men, is because they make a great *litter*: not a word more; however, the servant cleared away, and down sat the philosopher. A friend dropt in soon after—"Your servant, Sir, how do you do?" "O Lord! I am almost fatigued to death; I have been all the morning making philosophical experiments." I was now more hardly put to it to smother a laugh, than I had been just before to contain my rage: my *precious* went out soon after, and I, as you may suppose, mustered all my forces; brushes, buckets, soap, sand, limeskins, and cocoa-nut shells, with all the powers of housewifery, were immediately employed. I was certainly the best philosopher of the two; for my experiments succeeded, and his did not. All was well again, except my poor carpet—my vitriolized carpet, which still continued a mournful memento of philosophic fury, or rather philosophic folly. The operation was scarce over, when in came my experimental philosopher, and told me, with all the indifference in the world, that he had invited six gentlemen to dine with him at three o'clock. It was then past one. I complained of the short notice. "Poh! poh!" said he, "you can get a leg of mutton, and a loin of veal, and a few potatoes, which will do well enough." Heaven! what a chaos must the head of a philosopher be! a leg of mutton, a loin of veal, and potatoes! I was at a loss whether I should



laugh or be angry ; but there was no time for determining : I had but an hour and a half to do a world of business in. My carpet, which had suffered in the cause of experimental philosophy in the morning, was destined to be most shamefully dishonoured in the afternoon by a deluge of nasty tobacco juice. Gentlemen smokers love segars better than carpets. Think, Sir, what a woman must endure under such circumstances : and then, after all, to be reproached with cleanliness, and to have her white-washings, her scourings, and scrubblings, made the subject of ridicule : it is more than patience can put up with. What I have now exhibited is but a small specimen of the injuries we sustain from the boasted superiority of men. But we will not be laughed out of our cleanliness. A woman would rather be called any thing than a *slut*, as a man would rather be thought a knave than a fool. I had a great deal more to say, but am called away ; we are just preparing to white-wash, and of course I have a deal of business on my hands. The white-wash buckets are paraded, the brushes are ready, my husband is gone off—so much the better ; when we are upon a thorough cleaning, the first dirty thing to be removed is one's husband. I am called for again. Adieu.

OF LIGHTNING, AND THE BEST METHOD OF GUARDING AGAINST ITS MISCHIEVOUS EFFECTS.

EXPERIMENTS made in electricity first gave philosophers a suspicion, that the matter of lightning was the same with electric matter. Experiments afterwards made on lightning, obtained from the clouds by pointed rods, received into bottles, and subjected to every trial, have since proved this suspicion to be perfectly well founded ; and that whatever properties we find in electricity, are also the properties of lightning.

This matter of lightning, or of electricity, is an extreme subtle fluid, penetrating other bodies, and subsisting in them, equally diffused.

When, by an operation of art or nature, there happens to be a greater proportion of this fluid in one body than in another, the body which has most will communicate to that which has least, till the proportion becomes equal, provided the distance between them be not too great ; or, if it is too great, till there be proper conductors to convey it from one to the other.

If the communication be through the air, without any conductor, a bright light is seen between the bodies, and a sound is heard. In our small experiments, we call this light and sound the electric spark and snap ; but in the great operations of nature, the light is what we call *lightning*, and the sound (produced at the same time, though generally



arriving later at our ears than the light does to our eyes) is, with its echoes, called *thunder*.

* If the communication of this fluid is by a conductor, it may be without either light or sound, the subtle fluid passing in the substance of the conductor.

If the conductor be good and of sufficient bigness, the fluid passes through it without hurting it. If otherwise, it is damaged or destroyed.

All metals, and water, are good conductors. Other bodies may become conductors by having some quantity of water in them, as wood, and other materials used in building, but not having much water in them, they are not good conductors, and therefore are often damaged in the operation.

Glass, wax, silk, wool, hair, feathers, and even wood perfectly dry, are non-conductors: that is, they resist instead of facilitating the passage of this subtle fluid

When this fluid has an opportunity of passing through two conductors, one good, and sufficient, as of metal, the other not so good, it passes in the best, and will follow it in any direction.

The distance at which a body charged with this fluid will discharge itself suddenly, striking through the air into another body that is not charged, or not so highly charged, is different according to the quantity of the fluid, the dimensions and form of the bodies themselves, and the state of the air between them. This distance, whatever it happens to be between any two bodies, is called their *striking dis-*

tance, as, till they come within that distance of each other, no stroke will be made.

The clouds have often more of this fluid in proportion than the earth ; in which case, as soon as they come near enough (that is, within the striking distance) or meet with a conductor, the fluid quits them and strikes into the earth. A cloud fully charged with this fluid, if so high as to be beyond the striking distance from the earth, passes quietly without making noise or giving light ; unless it meets with other clouds that have less.

Tall trees, and lofty buildings, as the towers and spires of churches, become sometimes conductors between the clouds and the earth ; but not being good ones, that is, not conveying the fluid freely, they are often damaged.

Buildings that have their roofs covered with lead, or other metal, and spouts of metal continued from the roof into the ground to carry off the water, are never hurt by lightning, as, whenever it falls on such a building, it passes in the metals and not in the walls.

When other buildings happen to be within the striking distance from such clouds, the fluid passes in the walls, whether of wood, brick, or stone, quitting the walls only when it can find better conductors near them, as metal rods, bolts, and hinges of windows or doors, gilding on wainscot, or frames of pictures, the silvering on the backs of looking-glasses, the wires for bells, and the bodies of animals, as

containing watery fluids. And in passing through the house it follows the direction of these conductors, taking as many in its way as can assist it in its passage, whether in a straight or crooked line, leaping from one to the other, if not far distant from each other, only rending the wall in the spaces where these partial good conductors are too distant from each other.

An iron rod being placed on the outside of a building, from the highest part continued down into the moist earth, in any direction, straight or crooked, following the form of the roof or other parts of the building, will receive the lightning at its upper end, attracting it so as to prevent its striking any other part; and, affording it a good conveyance into the earth, will prevent its damaging any part of the building.

A small quantity of metal is found able to conduct a great quantity of this fluid. A wire no bigger than a goose-quill has been known to conduct (with safety to the building as far as the wire was continued) a quantity of lightning that did prodigious damage both above and below it: and probably larger rods are not necessary, though it is common in America to make them of half an inch, some of three quarters, or an inch diameter.

The rod may be fastened to the wall, chimney, &c. with staples of iron. The lightning will not leave the rod (a good conductor) to pass into the wall (a bad conductor) through those staples. It would rather, if any were in the wall, pass out of it into the

rod to get more readily by that conductor into the earth.

If the building be very large and extensive, two or more rods may be placed at different parts, for greater security.

Small ragged parts of clouds, suspended in the air between the great body of clouds and the earth (like leaf gold in electrical experiments) often serve as partial conductors for the lightning, which proceeds from one of them to another, and by their help comes within the striking distance to the earth or a building. It therefore strikes through those conductors a building that would otherwise be out of the striking distance.

Long sharp points communicating with the earth, and presented to such parts of clouds, drawing silently from them the fluid they are charged with, they are then attracted to the cloud, and may leave the distance so great as to be beyond the reach of striking.

It is therefore that we elevate the upper end of the rod six or eight feet above the highest part of the building, tapering it gradually to a fine sharp point, which is gilt to prevent its rusting.

Thus the pointed rod either prevents a stroke from the clouds, or if a stroke is made, conducts it to the earth with safety to the building.

The lower end of the rod should enter the earth so deep as to come at the moist part, perhaps two or three feet; and if bent when under the surface so as to go in a horizontal line six or eight feet from

the wall, and then bent again downwards three or four feet, it will prevent damage to any of the stones of the foundation.

A person apprehensive of danger from lightning, happening during the time of thunder to be in a house not so secured, will do well to avoid sitting near the chimney, near a looking glass, or any gilt pictures or wainscot ; the safest place is in the middle of the room (so it be not under a metal lustre suspended by a chain) sitting in one chair and laying the feet up in another. It is still safer to bring two or three mattresses or beds into the middle of the room, and, folding them up double, place the chair upon them ; for they not being so good conductors as the walls, the lightning will not choose an interrupted course through the air of the room and the bedding, when it can go through a continued better conductor, the wall. But where it can be had, a hammock or swinging bed, suspended by silk cords equally distant from the walls on every side, and from the ceiling and floor above and below, affords the safest situation a person can have in any room whatever ; and what indeed may be deemed quite free from danger of any stroke by lightning.

B. FRANKLIN.

Paris, Sept. 1767.

TO PETER COLLINSON, ESQ. F. R. S. LONDON.

Electrical Kite.

SIR,

Philadelphia, Oct. 19, 1752.

As frequent mention is made in public papers from Europe of the success of the Philadelphia experiment for drawing the electric fire from clouds by means of pointed rods of iron erected on high buildings, &c. it may be agreeable to the curious to be informed that the same experiment has succeeded in Philadelphia, though made in a different and more easy manner, which is as follows :

Make a small cross of two light strips of cedar, the arms so long as to reach to the four corners of a large thin silk handkerchief when extended ; tie the corners of the handkerchief to the extremities of the cross, so you have the body of a kite ; which being properly accommodated with a tail, loop, and string, will rise in the air, like those made of paper ; but this being of silk is fitter to bear the wet and wind of a thunder gust without tearing. To the top of the upright stick of the cross is to be fixed a very sharp pointed wire, rising a foot or more above the wood. To the end of the twine, next the hand, is to be tied a silk ribbon, and where the silk and twine join, a key may be fastened. This kite is to be raised when a thunder-gust appears to be coming on, and the person who holds the string must stand within a door or window, or under some cover, so that the silk ribbon may not be wet ; and care must

be taken that the twine does not touch the frame of the door or window. As soon as any of the thunder clouds come over the kite, the pointed wire will draw the electric fire from them, and the kite, with all the twine, will be electrified, and the loose filaments of the twine will stand out every way, and be attracted by an approaching finger. And when the rain has wetted the kite and twine, so that it can conduct the electric fire freely, you will find it stream out plentifully from the key on the approach of your knuckle. At this key the phial may be charged; and from electric fire thus obtained, spirits may be kindled, and all the other electric experiments be performed, which are usually done by the help of a rubbed glass globe or tube, and thereby the sameness of the electric matter with that of lightning completely demonstrated.

B. FRANKLIN.



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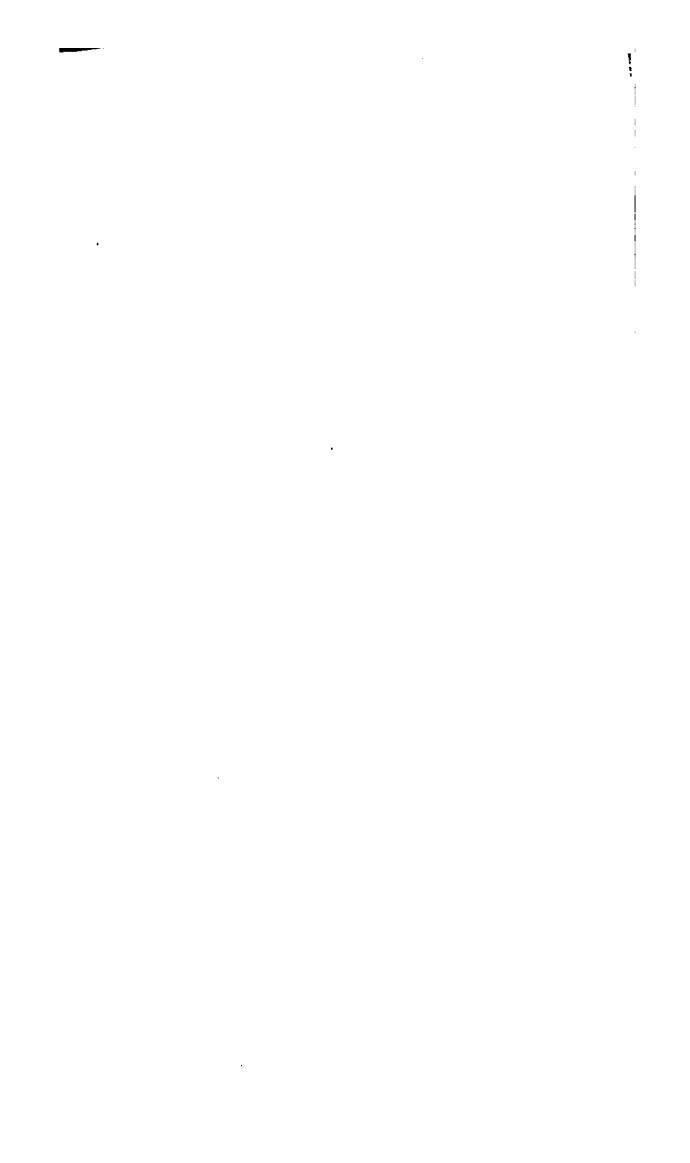
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